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ABSTRACT

This curriculum unit is part of a larger curriculum developed around the broad theme of change. In this unit students will explore how a culture's myths and traditions reflect their environmental practices. As students actively explore environmental issues, their understandings of those issues change, which in turn fosters self-growth (i.e., change) as students reflect on their previously and newly held values. In addition to the broader questions of the larger curriculum--Can we affect change? Is change inevitable? How is change viewed?--students will be able to examine the power and authority that different cultures grant humans to manipulate and change their natural surroundings. In this process they will begin to understand the connotation of the term change and how the concept itself is only a template that is given meaning through different cultural lenses. With these three guiding questions a teacher will be able to create a context for children to question their own abilities to affect the natural world and whether these practices are consistent with their evolving environmental ethic. Contents of the unit include: (1) Rationale; (2) Organization; (3) Goals and Objectives; (4) Learning Activities; (5) Assessment; and (6) Subject Matter Overview. Also contains resource lists and samples of unit materials. (PVD)

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ED 412 090

A Curriculum Unit

for grades 5 and 6:

"A Changing Planet: Cultural Worldviews and the Environment"

By

Deborah Barca
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May 1997

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RATIONALE

In developing a larger curriculum unit around the broad theme of *change*, we were able to build an overall framework that was highly expandable, change is a concept that is applicable to any number of social, cultural and historical processes which affect the way individuals relate to society and to the natural world. In turn, the larger unit includes several avenues for deeper exploration into various facets of change as they apply to specific topic areas. Our reasoning for this is that change in itself is a relational concept, meaning that it can only be examined concretely *in relation* to a particular phenomenon, or else it remains abstract in its isolated form. In line with this notion is the highly variable nature of change as it is placed in different contexts, and for our purposes, different topic areas. In our larger curriculum we have addressed this condition with our three guiding questions which together serve as the vehicle for recognizing these variations between contexts. "Is change inevitable?", "How is change viewed?", and "Can we affect change?". There is little doubt that the possible answers to these questions will vary according to which subject area one is grounding the analysis. When looking at civil rights one would tend to view the notion of change as forward and progressive; the aim of civil rights is to stretch individuals and groups to feeling a shared sense of humanity. However, when looking at the relationship between humans and the natural world, one must begin to question the connotations surrounding change, and whether the metaphorical meanings for change in our society, i.e., progress and development, are linked to the current ecological crisis.

The curriculum unit which follows is thus consistent with the larger unit in that the three guiding questions as well as the six "universal truths" (i.e., organizing principles) about change, devised within the larger framework, will also be used to structure learning experiences within the individual unit. However this unit will focus on one particular context of change, namely that of the environment, and the ways in which human interests,

traditions, practices, and perceptions affect the natural world. Within this program of study students will explore cultural behaviors and beliefs, and the role they play in how nature -- often referred to as 'natural resources' -- are used by the society. As a method of cultural comparison students will examine, through several mediums, the concerns of indigenous groups to reveal how native ties to the land have affected the way these groups relate to the natural world. Within this unit children will not study *about* the environment per se, for I believe that this will serve to perpetuate the division between man and nature found within Western scientific paradigms. This way of thinking is in large part responsible for the objective and culture-free approach to studying the human mind as separate from the external world. Dating back to the ideas of Descartes in the seventeenth century, human success within Western culture has been defined by the ability to experiment with, manipulate, and in turn control the natural world. According to the German philosopher Martin Heidegger, the fundamental change in our way of thinking introduced by Descartes is to conceive of the world as a picture (Bowers, 1993). It is this sense of being 'an observer' that has strengthened other cultural assumptions, such as that the world is to be understood and valued only from the perspective of human needs and interests. Expressed by C. A. Bowers as an "anthropocentric" view of the world, he says that this idea has "positioned man at the apex or center" (1993, p.28).

It is precisely this worldview I wish to question with my students, an aim which requires us not to look *at* the environment, but rather at *ourselves* in relation to it. The focus on ecological connections is most essential if a unit of study is not to reinforce the dualistic relationship between society and the ecosystem. The natural world is not a laboratory, and therefore the focus of content herein will not be on the use of science and technology as the primary means of solving the ecological crisis; this would suggest to students that all problems require scientific understanding, and in turn, technological solutions. Instead our focus will be on a value-based understanding of the relationship between 'self', culture and the ecosystem. In turn we will explore the myths and traditions

of alternative worldviews, ones that have been 'romanticized' and simplified by our society in order to make way for the forward stampede towards progress and change

I believe that the implicit understandings about the natural world which individuals collectively hold within a culture are at the core of most human behavior. In turn, I feel that children need to explore these relationships from cultural perspectives, and to understand the way a group, whether or not indigenous, is driven by its traditions. These traditions become part of a way of life that defines concepts such as *time*, *change*, *freedom*, *community*, and *technology*. It is in viewing these terms metaphorically that students will begin to notice the patterns of culture within the economic and political practices of their society. As a result they will know how to get to the root of a particular practice they wish to change according to ecological, rather than purely scientific principles. It is this idea of an ecological model that children must grapple with as they learn to reframe their own culturally-embedded ideas of progress 'via' development, and the responsibility of the individual as part of the biosphere. For students, this shift towards an ecological 'way of seeing' will revolve around this guiding question. "How can a society be sustainable, or satisfy its own needs without diminishing the prospects of the next generation?"

Although scientific knowledge is necessary for devising possible solutions, it can not be separated from the idea that cultural beliefs drive behavior. This premise is based on my belief that the complexity of relationships between human actions and the environment cannot be grasped in terms of the 'objective' images provided by the field of science, rather, these images are constantly shaped and reshaped by human judgments within particular historical and social contexts. It is important for children to understand these contexts, and in doing so to compare the different values and points of view they represent. Above all else, I feel children need to understand that the ecological crisis at hand is the product of human action, and not some far-removed intangible 'force' that cannot be penetrated by individuals. By re-introducing individual values into the scientific

knowledge process, children will begin to view 'the environment' as their own sphere of human action and responsible *choice*.

By the time students reach the fifth grade they have been exposed to the scientific approach of studying phenomena -- how organisms develop, how plants and trees grow, how weather 'happens', what the earth is 'made of'. In combination with this knowledge base, students are at a point in their personal development when their ability to think critically and to consider alternative points of view is coming to fruition. Therefore I see this grade level as a threshold through which their knowledge and opinions begin to merge, and are expressed through their actions and interactions. It is at this critical time in their intellectual and moral development that alternative worldviews need to be explored in terms of the ecological relationships they foster, or in some cases, suppress. In developing their own set of values students need to consider their role in the natural world, which will inevitably inform their opinion on a countless number of issues, many of which extend above and beyond "the environment" per se. By exploring the wide spectrum of values and beliefs contained within a particular land ethic, they will be able to see the connections between cultural, economic, and political interests. This is critical for pre-adolescents as they begin to find their niche in the wider social sphere and decide whether ecological sustainability will factor into the decisions they make.

In this curriculum unit, one in which students will explore how a culture's myths and traditions reflect their environmental practices, the teacher's role must be delicately defined as to not exert undo influence over the valuing and decision-making process. The inquiries that students will be engaged in are not to reproduce old knowledge, or the understandings of their teacher. Rather, their knowledge needs to be constructed through an individual process which gives meaning and value to the experience. Without this component student learning will not emerge as useful and usable in real life, and the essential link between their understandings and their actions will not be made. In terms of environmental education, learning becomes void without a direct connection between

beliefs and behaviors. Therefore, the traditional role of the teacher must change. The curriculum cannot be arranged solely by the concepts the teacher wishes the students to learn, instead the problems students grapple with must come from outside the teacher's immediate control in the form of legitimate questions -- i.e., questions which do not have readily known answers. In light of this need, the idea of the teacher as one who *poses meaningful contexts* for students to incorporate their own value judgments, expectations, and lived-through experiences is primary to this curriculum unit. Any work towards environmental justice must be internally-driven and the result of a comparison of different value systems. This work should also avoid the educational assertion that knowledge will produce awareness and sensitivity *per se*, and instead should look to establish ties with the natural world that come from a feeling of belonging. For many people within our society the environment is not automatically a value, therefore the link between values and knowledge is essential if students are to cultivate a feeling of *need* for the environment. In this way student learning needs to become local, in that ties are made with a small piece of the world which students come to respect. For this reason our exploration of 'other' worldviews will be combined with a look at the space which immediately surrounds us.

In sum, this unit serves to deepen and expand the general concepts and ideas of the overall curriculum by attending to the meaning of change, from a personal as well as an ecological perspective. As students actively explore environmental issues, their understandings of those issues change, which in turn fosters self-growth (i.e., change) as students reflect on their previously and newly-held values and beliefs. In relation to the overarching questions of the larger curriculum -- Can we affect change? Is change inevitable? How is change viewed? -- students will be able to examine the power and authority that different cultures grant humans to manipulate and 'change' their natural surroundings. In this process they will begin to understand the connotation of the term change, and how the concept itself is only a template that is given meaning through different cultural lenses. With these three guiding questions, a teacher will be able to

create a context for children to question their own abilities to affect the natural world, and if these practices are consistent with their evolving environmental ethic

ORGANIZATION

In the process of organizing this unit within a framework that will provide continuity between and within learning experiences, the three guiding questions and six general principles from the larger curriculum have been used as a starting point. For the purpose of making these organizing elements more directly relevant to the study of culture and the environment, each question and principle will be explored in more detail in order to make these connections explicit. What follows is an overview of the guiding questions introduced in the larger curriculum along with specific references to how they relate to the content of the unit herein.

Guiding Questions

1. Is change inevitable?-------->Does progress *have* to mean greater changes and alterations to the physical world? How would the natural world change without any human intervention? In regard to the environment, are the practices that use up and exploit nature necessary for leading a satisfying life? How does our economy promote these changes?

2. How is change viewed?----->How do different cultures view changes in the natural world? How are these beliefs reflected in the myths and traditions of a society? How does the economic life in our modern society affect the way we view change? How do different cultures view the terms 'progress' and 'development'?

3. Can we affect change?------>Can societies control, through human choice, the changes they create within the natural world? Can individuals control the changes that are made? Can an individual's behaviors and actions affect the condition of the natural world? Can their behaviors and actions affect the way others view nature?

As these questions are introduced to students, they will serve as the backdrop for instructional activities and in turn will emerge from students in a way that is most meaningful for them. As stated in the rationale, the teacher's role in developing a framework is to provide a context for children to ask their own questions. In this regard these questions serve as the parameters within which the teacher can create such an environment.

As a way of seeing the learning experience through to its culmination, the general principles put forth in the larger curriculum serve as a set of universal understandings students can reach about the nature of change. Since these principles are overarching and can encompass many different perspectives and contexts, they will also be used within this smaller unit for forming objectives about how students will make meaning of these principles through their own inquiry. While there are numerous generalizations about environmental change we could examine, these six have been deliberately chosen because they seem to cut across social, cultural, and historical boundaries. In turn, students will have more opportunity to construct their own understandings in light of their own interests and experiences. They are as follows:

1. Change is a universal characteristic of all human societies.
2. Through individual and cooperative efforts, people can make changes in their lives.
3. While time and circumstances may change, certain aspects of humanity are shared across time and space.
4. Changes in the physical world affect people's beliefs and behaviors.
5. Changes in people's beliefs and behaviors affect the physical world.
6. The rate of change can be either evolutionary or revolutionary [in nature].

Thus, the questions can be seen as the ideas that will draw students *into* the process, and the general principles as the understandings they will *come away* with as a result of their explorations. However it will be the emergent nature of the inquiry process itself that will allow students to form their own opinions about the changes occurring in the natural world, and to incorporate their own values and beliefs into how they wish to define their relationship to the environment.

The content of this unit is to be composed of two main components which will be integrated to create a more holistic picture of the connections between humans and the

natural world. These components will address environmental issues across 1) time, and 2) cultures. As opposed to a purely chronological approach, the content of the unit will be examined in a compare and contrast style, one that will combine modern ecological viewpoints with ways that cultures have historically related to the natural world. In practice the three primary vehicles for this exploration will be: 1) *Indian Country Today* newspaper, a national publication that consistently addresses environmental issues as they relate to Native cultures and traditions, 2) the book Guests, by Michael Dorris, a piece of historical fiction that depicts the coming of age of a Taino boy in 1492 against the historical backdrop of Columbus' arrival, and 3) The Environmental Atlas of the United States by Mark Mattson, an informational text that provides a comprehensive overview of environmental issues from an historical perspective. It is this latter text that will allow children to integrate the components of time and culture through its more objective presentation of several -- and often opposing -- viewpoints. It blends clear explanations about how specific environmental dilemmas have evolved over time (through the use of colorful "user-friendly" charts and diagrams) with a look at how different cultures in this country have viewed change. In sum, the content of this unit will integrate the affects of time and culture on the environment, or rather will be used to compare alternative points of view over time and across cultures. Students will be able to in turn use these understandings as they engage in active inquiry about an issue/problem of interest to them.

A sense of connectedness between the activities taking place over the course of this unit will emerge through the overarching focus on cultural behaviors and beliefs as the primary unit of investigation. In other words, rather than looking at each 'environmental topic' as separate areas of study, which would in turn suggest that each problem is an isolated phenomenon, the focus will be on *people* as they relate to all aspects of the natural world will help to unify the various topical issues as they come up naturally. The rationale behind this approach is that in order to create an authentic learning experience -- one that will foster ecological *connections* -- the curriculum cannot artificially categorize

environmental problems for the mere sake of 'scientific investigation'. I believe that this tendency to compartmentalize problems leads our society away from the underlying roots of the dilemmas we face. From a holistic perspective, the continuity between activities will be assured through a central focus on the *causes* (man-made) rather than the *symptoms* (the problems 'per se'). Therefore, rather than devoting a week to "the greenhouse effect" and a week to "pollution", we will continuously look at the way human groups view the environment and will address specific topics *as* they become relevant to the overall investigation of attitudes, beliefs, and behaviors [over time and across cultures].

In reference to the use of time over the course of this four to six week investigation, learning activities will occur in two sequential phases. The first will consist of gathering information, ideas, and viewpoints about the environment, and the second will be a time of decision-making in regard to the specific actions students would like to take in order to make their opinions known to a larger audience. In the first phase of experience students will draw upon their own values and beliefs as a way of making meaning of the viewpoints they will be introduced to. In the second phase they will internalize and in turn use their emerging understandings to impact the wider social sphere. The latter will consist of many options, the most likely of which will be letter-writing, either to a political body (i.e., Congress), a non-governmental organization, or perhaps the editorial board at *Indian Country Today* explaining how they have been following a particular issue in their newspaper and would like to introduce "a fresh" point of view about what they have learned. It is this phase of social action that will require students to do the research necessary for presenting an informed, reasonable, and well-justified argument to their chosen audience.

The classroom environment that will best foster experiences in which children interpret as well as generate legitimate sources of information is one that highly values open dialogue as a means of increasing knowledge and awareness about real-life issues. In order to maximize learning during class discussions children must be able to access a

variety of secondary sources either right in the classroom or in the library. I believe there needs to be a balance between their exposure to materials that clearly reflect a particular worldview or interest, with those that give a more 'objective' overview of the ecological crisis at hand. Therefore it is the responsibility of the teacher to provide the appropriate context for children to form opinions that are informed and well-rounded. This will require an atmosphere in which instruction is non-didactic and minimally biased. Although their are certain ideals that the teacher can indeed explicitly uphold, such as that environmental degradation is inherently undesirable, these core beliefs must be examined in relation to the economic and social realities that require destructive practices to occur. It is only in a classroom environment where several viewpoints are examined as equally valid that children can begin to truly create and internalize their own positions regarding multi-faceted and complex issues. Their are no easy answers to environmental problems, and students will only turn inward and examine what *they* believe in an atmosphere that proposes no 'clear-cut' solutions. What they can be equipped with however, is an understanding that a culture's environmental practices reflect the values and beliefs of that society as a whole.

GOALS AND OBJECTIVES

Since environmental attitudes, beliefs, and practices will be explored from an historical as well as a contemporary perspective, students will need to be familiar with key concepts that they can transfer from one period in time to another. This will serve to create a sense of coherency between the events of the past and those of the present. However, in light of the inseparability of knowledge and values in any learning situation, particularly those that examine human behavior in a social context, the objectives of this unit will not be categorized according to 'before' (gaining knowledge) and 'after'(forming opinion) components of the learning process. If pieces of knowledge are indeed the 'bricks' that build understanding, then individual values and beliefs serve as the 'mortar' between each and every piece. Therefore the objectives contained herein will be consistent with the overall framework of *change* in that they will reflect a dynamic, action-oriented approach to knowledge that is embedded in the experiences of everyday living. Although below is a list of intended outcomes, it should not be viewed as a static prescription for learning, since each student's individuality will inform the process and in turn the understandings they come away with. Objectives for this unit will be organized according to the overall generalizations about change within the larger curriculum:

GENERALIZATION #1: Change is a universal characteristic of all human societies.

Related to the Environment: While universal, *change* is also culturally-defined, the meaning and intended outcomes of change vary between groups.

Conceptual/Inquiry Goals: 1) Students will understand that attitudes and beliefs about the natural world are culturally-based. 2) Students will understand that innovation can have positive or negative implications depending on the perspective, the circumstance, and the specific outcome being considered.

Objectives/Skills: 1) Students will be able to identify between a fact and a value claim, 2) Students will be able to identify unstated assumptions about the natural world as reflected in a culture's media.

GENERALIZATION #2: Through individual and cooperative efforts people can make changes in their lives.

Related to the Environment: The environment is a sphere of personal influence and effort towards its sustainability is inevitably a social movement.

Conceptual/Inquiry Goals: 1) Students will learn about the effects of their own interactions with the natural world and will understand that they can actively persuade others to think ecologically. 2) Students will understand the power of the media to sway public opinions and/or attitudes about the environment. 3) Students will begin to see environmental problems as challenges for initiative and responsible action.

Objectives/Skills: 1) Students will be able to participate in discussions of real moral dilemmas related to the environment; 2) They will be able to identify alternatives to current practices and will 3) Be able to devise a plan for promoting these alternatives in the wider social sphere.

GENERALIZATION 3#: While time and circumstances may change, certain aspects of humanity are shared across time and space.

Related to the Environment: The interrelationships between humans and the natural world are universal.

Conceptual/Inquiry Goals: 1) Students will understand the basic interdependence of humans, animals, and nature and its role in survival. 2) Students will understand the deliberate human actions which have sought to alter and manipulate these ecological relationships.

Objectives/Skills: 1) Students will develop an ecological literacy, i.e., they will be able to identify a variety of key concepts that relate *culture* and *human behavior* to the *natural environment.* (see concepts below). 2) Students will be able to recognize *the chain* of ecological effects that result from a particular human intervention.

GENERALIZATION #4: Changes in the physical world affect people's beliefs and behaviors.

Related to the Environment: Conditions such as population growth/distribution, technological changes, political changes, and industrialization affect people's attitudes/beliefs about their relationship to the natural world.

Conceptual/Inquiry Goals: Students will learn about the economic and political realities in this country that have historically altered beliefs and attitudes about the environment.

Objectives/Skills: 1) Students will be able to compare and contrast indigenous and European cultures in this country according to how they define root concepts such as 'change', 'progress', and 'development'. 2) Students will be able to analyze the differences and similarities between cultures in relation to the historical events and conditions which shaped their beliefs and values.

GENERALIZATION #5: Changes in people's beliefs and behaviors affect the physical world.

Related to the Environment: Societal norms and sanctions have a powerful influence on how we use and misuse the physical environment; the capacity of the environment to accommodate our growing needs is rapidly reaching its limit.

Conceptual/Inquiry Goals: 1) Students will understand the concepts of *norm* and *sanction* as they relate to their own beliefs and everyday behaviors. 2) Students will learn how United States policies regarding the use and 'development' (see skills #4 above) of our natural environment reflect the norms and sanctions of our society during a particular historical period.

Objectives/Skills: Students will be able to 1) detect bias and 2) identify logical fallacies in written materials that promote a particular viewpoint about an environmental issue (i.e., government documents, editorials, economic reports, etc.). 3) Students will be able to engage in inquiry to uncover relevant information/reasons regarding such bias and 4) will generate their own material that presents and justifies their own position in light of their recent discoveries.

GENERALIZATION #6: The rate of change can be either evolutionary or revolutionary [in nature].

Related to the Environment: The rate of change in the physical environment has grown dramatically and in direct relation to the increase in technology and industry; the likelihood of environmental disasters (revolutionary changes) also increases in relation to technological capacity.

Conceptual/Inquiry Goals: 1) Students will understand the interaction between capitalism (i.e., market economy) and the environment over time. 2) Students will understand that the explosion in population and energy consumption over the last century were the result of gradual changes over time.

3) Students will learn that since the ecological crisis at hand has social roots, solutions must involve change in human relationships and attitudes rather than merely technical reforms. 4) Students will understand the increased likelihood of radical environmental change as the earth's ability to safely sustain human wants and needs decreases.

Objectives/Skills: Students will be able to trace historically the rate of change as it pertains to specific environmental issues such as overpopulation, energy consumption, extinction of species, loss of biodiversity, acid rain, deforestation, soil erosion, floods, etc. 2) Students will be able to recognize the build up of changes and their results and 3) will be able to explain evolutionary and revolutionary change in terms of cause and effect relationships.

Overall, students will come away from this unit with the increased understanding of how beliefs and attitudes about the environment have changed over time, as well as the ability to detect the bias and underlying assumptions contained within the information sources they encounter in the present day. Most importantly, they will be able to distinguish between a factual statement and those that are motivated by special economic/political interests. I feel that the ability to decipher points of view and to begin to see the connection between cultural beliefs and environmental behavior are most critical if students are to engage in the inquiry process; during this process they will be exposed to multiple points of view that are most often *not* explicitly stated. In being able to see the world through an ecological lens -- the advertisements they see, the news they read/hear, the clothes they wear, the food they eat, the garbage they generate -- students will be more likely to adopt an ecological 'way of seeing' that will emphasize the connections between their own wants and needs and the needs of the natural world which provides for them daily. Since the unit will integrate the study of the past with that of present-day issues and problems, students will be able to put their own immediate concerns about the environment into a cultural and historical perspective. It is in this way that they will be better equipped to consider alternative courses of action now and in the future.

Skills Overview

Students will be able to:

- select appropriate medium to convey information and ideas
- generate and execute role play
- cooperate
- adopt another person's or living thing's point of view
- engage in both group and individual decision-making
- evaluate the consequences of decision-making
- utilize a variety of strategies to solve problems
- use comparison and contrast as an analytic tool
- apply "what I know" and "what I need to know" concept as a means of focusing on information
- use maps to make decisions about population, geographical features and the environment
- use maps to verify facts and generate explanations about environmental concerns
- apply their own values and beliefs to environmental issues
- apply their own values and beliefs to an environmental cause

LEARNING ACTIVITIES

The following should be seen as an overview of the various activities and learning experiences students will have been engaged in as a result of this unit. Since the teacher will be continually assessing the effectiveness of activities as they occur, he or she may decide to devote more time to a particular learning experience in order to maximize their understanding of the content being covered. However, in order to create a holistic experience for the children and to appeal to many different learning styles, each one of the activities below will be implemented at some point in the unit.

CURRENT EVENTS

To keep up with the rapidly changing world, and more specifically to address the powerful role of the media in determining environmental attitudes, concerns, and policies, newspapers will be utilized consistently throughout the unit. In light of the emphasis on how a culture's media priorities (what makes the front page?) largely reflect the attitudes and beliefs of the group as a whole, we will be using a newspaper entitled *Indian Country Today* in order for students to familiarize themselves with the environmental concerns and lifestyles of Native people. The articles in this newspaper are fascinating in that they combine history (broken treaties) with contemporary social concerns, and in turn link them both to the land, which Native people tend to see as a physical yet symbolic representation of their culture and traditions. The people are the land, the land is the people. It is precisely this idea of humans as an integral part of nature that has been deemed an 'alternative' point of view by mainstream American culture. It is for this reason that *Indian Country Today* will be so valuable for expanding the way students think about the environment, and for them to begin to see that it is the culture and its media that determine what is 'peripheral' and what is headline news. In order to allow students to compare and contrast the concerns of Native Americans with those of wider society, we will also

be using articles and editorials from mainstream papers such as *The New York Times*. Although the articles in *Indian Country Today* are highly accessible to young people, the teacher may want to give a short summary of those taken from *The Times* and other papers which use more elevated language. In both cases, however, the editorials will be addressed through a teacher read-aloud format so she can help students develop a critical viewpoint of the writer's perspective.

ROLE PLAY

One of the most important aims of teaching is to prompt students to empathize with other human beings, and in the case of learning about the environment, with other forms of life. Within this unit role play will serve as a primary vehicle for allowing students to connect with others that whom, on the surface, they may appear to have little in common. This is a fundamental goal of the curriculum herein, since it is only when students tap into their own sorrow, joy, pride, and confusion that they can rethink their own attitudes towards the natural world. Role play will serve to draw students into the social dynamics of environmental issues; this will in turn encourage them to wonder about the *social contexts* that provoke hurtful behaviors, rather than to dismiss individuals as inherently 'good' or 'evil'. Students will engage in role play as a way of examining many perspectives on the issues they will be learning about. For example, after reading an article or viewing a film about logging in old-growth forests, students can role play the interests of timber companies, loggers, environmentalists, the salmon, owls, rivers, and trees. In this process students will begin to see the complexity of an issue that, on the surface, may seem to have an easy and 'natural' solution.

INTERIOR MONOLOGUES

Described by Bill Bigelow in *Rethinking Our Classrooms*, an interior monologue shares characteristic of the role play in that students take on the perspective and imagine the thoughts of a character in history, literature, or life at a specific point in time. These two activities, however, differ in their form of expression. An interior monologue is a written piece in the form of either a narrative, poem, or perhaps a dialogue poem. This activity allows students to relate to the experience of another, but through a personal and individual process. Whereas the role play is highly social in nature, the interior monologue encourages students to self-reflect as they enter into the mind of another living thing. This is especially appropriate in this unit since rethinking one's relationship with the natural world often has to be a solitary process. However, students will have a chance to share after the creation phase is complete. In a time when collaborations are becoming more the norm in and out of the school, students need to be given the chance to be with themselves just to see what might happen. Perhaps if people spent more time in nature than they did with each other we would not have such an ecological crisis on our hands.

ARTISTIC EXPRESSIONS

Although almost all human effort can be seen as creative in one sense or another, artistic forms of expression must be given their own time and space to occur. As students think about the world we live in, they will not only be thinking realistically, but through their imagination. They will be encouraged to explore their role in the environment through painting, pretending, singing or dancing depending on which medium they feel best expresses what they want to say. Through the culminating project in which they will be devising a plan for action, the world of artistic expression will be completely open to them. Throughout the unit, however, they will be engaged in an on-going mural project that will allow students to represent what they are learning through a picture, a powerful

quote, or a short poem. This mural will become a smorgasbord of visual images for children to savor and reflect upon.

THE READING AND DISCUSSION OF LITERATURE

It may indeed be true that no other medium can evoke a more personal response to another individual's experiences than the narrative. Story provides the rich context and visual imagery that is so often lacking in informational and expository text. One of the major aims of this literature-based unit is to immerse students in the stories of individuals and groups as they relate to the natural world. In light of the emphasis on indigenous cultures, the teacher will use many different myths and stories that have been passed down through time, ones that are meant to convey the primacy of the land and its influence on the beliefs and values of the culture. In addition to an historical fiction piece entitled Morning Girl by Michael Dorris, we will also be using Native American stories from Keepers of the Earth, edited by Michael Caduto and Joseph Bruchac, To Become A Part Of It, edited by Joseph Epes Brown, as well as pieces by John Muir and Henry David Thoreau that have, over time, become literature.

PEER-LED DISCUSSIONS

The emphasis within this unit to peer-led rather than teacher-directed discussions is based on the premise that classroom dialogue needs to become decentralized. Rather than the teacher being the social and interpretive authority, students should learn to interact in a context that they will be more often faced with in real life. Students ten become less inhibited and express themselves more fully when they are responding to their peers instead of their teacher, to whom they often want to "say the right thing". However, teacher-led discussions are indeed still valuable if used to support students' ideas and provide necessary information for students to fully engage in a topic. It is for this reason that teacher-led discussions will not be dismissed, but will be used to supplement rather

than dominate peer interactions. This is especially important in a unit that encourages students to become citizen actors, as well as one with a basic framework that teaches students that they can affect change within society. Since this unit meets both these criteria, each peer-led discussions contained within it should be viewed as a micro-environment for what children will be encouraged to do in the wider social sphere. There is little doubt that when addressing social issues which are value-laden and emotionally-loaded students need to be challenged to rethink and justify their opinions, and there is no more effective challenger than one's peer.

PEER CRITIQUES

In this unit peer critiquing will be used for reasons similar to those under peer-led discussions, however this approach refers specifically to a time when students share particular pieces of work. However the purpose of the peer critique as it will be used herein will be to provide feedback for works that is in process, rather than for presenting final products. Since substantial time within this unit will be devoted to individual inquiry, it is essential that students feel as sense of collaboration and support during this process. By sharing what he or she has accomplished at a certain point, the student can then use the advice and support received from peers to rethink their original assumptions, as well as to consider ones that may not have even been considered. As with peer-led discussions, it is during this time that the teacher may provide guiding questions and clarifications, but in no way leads or directs the interactions.

RESEARCH

It is at the fifth grade level that students are ready to fully engage in the research process. As a result of this unit, students will choose focus that pertains to an environmental issue, and will in turn gather sources, collect and interpret their data, record relevant information, and analyze multiple points of view. However, the function of

research as it is viewed in this unit is not merely to increase knowledge, but rather for students to *use* the knowledge they acquire as part of an on-going inquiry that will guide them towards active participation. The goal of the research endeavor is for students to provide themselves with the tool necessary for making informed decisions about where they stand on an issue and why. As is the case in the real world, when individuals or groups are looking to affect change, whether it be in the realm of policy or everyday societal practices, they must fully understand all the circumstances surrounding the issue before they can persuade others to seek a particular alternative. Therefore an integral part of this unit will be the gathering of the tools that students will then use in an effort to make an impact on the wider social sphere.

INDIVIDUAL INQUIRY

The individual inquiry encompasses the research process but also extends beyond it in the sense that it is an overall "way of seeing" society through a particular lens. As a way of expressing this idea to students they will be asked to keep inquiry journals to record thoughts, questions, and new ideas whenever and wherever they might strike. Since the journal is with students at all times they are not limited to thinking about important environmental concerns during classtime only. Although the inquiry journal will be structured in three columns labeled 1) Information, 2)Source, and 3) Questions/ /Wishes/Complaints, students can record sources such as "Central Park on a Saturday" as a time when they observed how many people left their garbage behind. The overall idea being that inquiry is a state of mind, not a finite 'assignment' that begins and ends on preset dates. In regard to the modern-day condition of our natural world, it is absolutely essential that people start seeing their world as an ecosystem rather than a dumping sight for cultural byproducts. Therefore the inquiry process linked with research techniques will provide students with not only the ability to gather data, but to see it as well.

DIALOGUE /CRITICAL TEACHING

Although dialogue may often be a natural extension of the group discussion, it also must recognized as time when, as Ralph Peterson states in Grand Conversations, "the spirit of collaboration is tested" (1990, p 22). Whereas discussion can be seen as a series of intellectual interactions, dialogue is marked by passionate *re*actions to issues that challenge students to consider the ambiguities of real life, and the injustices that often prevail. This can be a time of tension in the classroom, and it is the role of the teacher to encourage critical thinking and initiative in students to look at issues in ways that some teachers may avoid in fear of being too controversial. In this unit, however, dialogue and critical teaching will be an integral part of learning about how our society has viewed the natural world. "Why, if we know that nuclear power plants and waste sites are hazardous to living things and represent a serious misuse of the earth, do people continue to operate them?" "What motivates groups and individuals to systematically degrade and destroy the earth?" This are just some examples of the questions that can be addressed through dialogue and critical teaching. During this unit students will be challenged to grapple with issues of injustice as they relate to the natural environment.

GROUP DISCUSSIONS

Class discussions will occur consistently to provide an arena for students to share their knowledge as well as listen to other point of view. Whereas peer-led discussions will be used at particular points within the unit when students confer in small groups to analyze specific issues, whole class discussions will be on-going and will be used to clarify and build students' understandings of the major ideas we are addressing. During these discussions students will be able to respond to ideas expressed in print and as a result construct their own meanings about what they read. The K-W-L technique will be used for discussions that occur before guest speakers and field trips. Activating prior knowledge will ensure that children are engaged in the discussion and will also help the teacher gauge

what areas need to be discussed. Students will be encouraged to take control of their own learning and to inform the teacher of the problems and issues they would like to raise and learn more about. It is the teacher's responsibility during discussion to provide information that will enhance the exploration of the content within this unit.

GUEST SPEAKERS

It is my belief that the closer children can get to the original source of information, the greater impact it will have on their learning. As a result of guest speakers, who will be representatives of local environmental organizations (see subject overview), children will have had the opportunity to articulate their ideas and questions to an individual who is indeed dedicated to the very issues and concerns that the students are themselves grappling with. This can create a powerful connection for students as they begin to became aware of the critical need for action on the part of individuals and groups to save the natural world. The state of our environment can become an area of anxiety for students if they are not made vividly aware of the dedicated efforts of some to do something about it. The guest speakers that will be part of this unit will visit the students after they have been engaged in inquiry and therefore will have been writing consistently in their inquiry journals. These journals will serve as a point of reference for students to ask questions that are focused and most meaningful to them. However the real aim of having these speakers come in is to stretch children to think about how they can make their concerns known to others and through what avenues they can become involved in the creation of change.

AUDIO TAPES

Audio tapes will be used as a classroom resource that will be accessible to students at all times. The tapes will consist of up-to-date radio programs that the teacher has been recording, and will continue to record throughout the unit. This weekly program is entitled

"Living On Earth" and is broadcast locally on 88.3FM in the New York area. However I believe that it can be heard anywhere in the country on various local stations. Teachers can find out about their specific area by contacting the "Living On Earth" headquarters in Cambridge, Massachusetts (see Appendix B). Each week the half-hour program will report on environmental issues that are of immediate concern, but not in a boring, journalistic format, but rather through the voices of environmentalists and other citizens who feel a stake in the issue at hand. The reports are concise, well-organized and take in multiple point of view, including those of policy-makers, business owners, and government officials. In this way the program upholds a major principle of this unit, it does not seek to inculcate values for the environment, but rather presents the complexity of the many different perspectives surrounding viable solutions. Although not explicitly stated in the Subject Overview, these audio tapes will serve as an on-going resource for children to keep on top of the issues they are learning about.

WRITING

An integral part of the learning experience will occur through writing. Whether it be in the form of a narrative, a poem, an interior monologue or a journal piece, students will be exercising their abilities to express their ideas through written language. This is essential for them as they become more aware of the power of language as a communicative and persuasive device. The writing experience within this unit will follow a natural progression in literacy development in terms of the skills and processes they will be asked to incorporate into their pieces. In the beginning the major aim of writing will be for students to simply articulate their ideas on paper, to use written language as a means of understanding what they are learning on a personal level. In this way writing will be used as a follow-up to films, role plays, readings, and other experiences that can be enriched through the process of reflection. Therefore these pieces can still be seen as functional in that they allow students to appreciate writing as a natural means of self-expression which

throughout life can be a means of personal satisfaction. However as children become more aware of the social, civic, and political implications of their own relationship to the natural world, they will be ready to communicate their messages to the wider social sphere. It is at this point that they will work on becoming *persuasive*, to construct a reasonable argument that they can defend and uphold, and more importantly, that they feel a deep sense of conviction for.

CITIZEN ACTION

Primary to this unit is children's active engagement in the issues they are exploring. The inquiry process is not only to uncover pre-existing knowledge about an issue, but rather should evoke students' "social imaginations", as Maxine Greene terms it, as a way of imagining what *could be* rather than accepting *what is*. However, because this unit does not seek to validate hypocritical behaviors, students will first have to reflect on their personal actions before they engage in political actions. Due to the focus on very real issues and not those contrived by the teacher, it is not possible, or even preferable, to foresee the exact direction that the curriculum will take. Although the learning experiences that will comprise the citizen action phase of this unit cannot be defined, they should not be taken for granted as events that will "spontaneously" occur as children acquire knowledge and new understandings. Rather, the desire for students to take action and become involved should be seen as the intended outcomes of a host of other learning experiences. It is the cumulative effect of inquiry, guest speakers, field trips, current events, role plays, personal narratives, visual images, artistic explorations, written expression, and the increased ability to empathize with other living things that will create the desire in children to make change happen. Although the teacher must relinquish control of the specific means through which they choose to act, he or she must support and guide students unconditionally.

ASSESSMENT

> *"Instead of giving children a task and measuring how well or how badly they do, one can give the children the task and observe how much and what kind of help they need in order to complete it successfully. In this approach the child is not assessed alone. Rather, the social dynamic of the teacher and child is assessed to determine how far along it has progressed"* (Brooks, 1993).

The above is from The Case for Constructivist Classrooms by Jacqueline Brooks and encompasses much of the way assessment is viewed in this unit. As it occurs within the context of instruction, assessment will be used as an on-going means of examining the processes as well as the products of learning. Since both instruction and assessment methods will stem from the goals set forth in this unit, they will each function as a means of reaching those goals. As the teacher combines informal with more structured assessment techniques, she or he will be able to respond instructionally as events unfold, rather than as an afterthought when the unit has been "said and done". With the exception of the factual information children will receive in regard to environmental conditions and, in direct relation, the way we use natural resources, children will be learning more about how *they relate* to the environment than about the environment 'per se'. This cannot be evaluated in terms of specific outcomes, but rather through observing and recording the connections students make between content and their own lives, as well as the behavior and attitude changes that result. The aim of this curriculum is not to inculcate new values but to clarify students' own values as they pertain to the environment. Therefore, under the premise that goals and assessments are directly linked through instruction, students will not be assessed on *what* values they come away with, but on how they have clarified their values so that they can become consistent with their practices. When Henry David Thoreau said that he needed to 'live deliberately', he explained it as intentional 'ways of living' based on what he understands, rather than on what he does not. All assessment

techniques within this unit will examine the connections students are making between what they think and what they do as it relates to the natural environment.

ANECDOTAL RECORDS

These informal notes will be kept in a small book during the unit as a means of recalling the everyday (and not so everyday) comments and behaviors that often provide valuable insights into students' learning and development. These records will prove useful as the teacher continually modifies her lesson plans in response to the data she collects. Therefore anecdotal records should not and will not be neatly tucked away so that they can be retrieved in another time and space. Rather they will be examined by the teacher at regular intervals and will even be shared with students at the appropriate moments. The latter approach is seen as a way of finding out how the student interpreted what the teacher observed. This can often serve to further clarify for both the teacher and the student how, if at all, the comment and/or behavior reflected what that student is actually learning. Therefore, at specific points in time the teacher will share her observations with each student, which will serve to lighten her responsibility as sole interpreter. I believe that anecdotal records are particularly appropriate for this unit because a substantial amount of activity will be student-directed and peer-led, and therefore will afford the teacher the opportunity to 'take note', as she is taking part. Also, in a case where the teacher feels personally-invested in the material being explored (as is the case herein), anecdotal records will allow her to distance herself from the work being done and to remain cognizant of what the students are coming away with.

STUDENT-TEACHER CONFERENCES

These conference will occur as students are engaged in the inquiry process. They will be integrated with instruction in that they will allow the teacher to help clarify the student's thinking while at the same time give the teacher a chance to jot down noted

about how well the student is internalizing the material. As the students are exposed to many different sources of information, the student-teacher conference will be a time when students can sift through it all and choose what is most relevant to their topic/issue. This is particularly important in this unit since issues about the environment are often highly related (as is all life) and are often difficult to separate. As the goal of this unit is *not* to see environmental problems as isolation, neither is it the criteria for assessment. Rather, during student-teacher conferences the teacher will look for how the student is relating his or her area of concern to the overarching goal of discovering sustainable ways of living. Therefore, during these conferences the teacher will keep a grid handy (see example following this section) to record if and how students are making these essential connections. The grid will also allow the teacher to record any questions that the student may have that in turn will allow her to respond instructionally.

Within this unit assessment and instruction are seen as two sides of the same coin. It is therefore important to note that these conferences will coincide with the unit's goal of fostering students' intrinsic curiosity about the natural world, and will therefore not be teacher-directed. The teacher will ask questions as an inquisitive human being, rather than as a Social Studies teacher 'per se'. In this way the teacher is more likely to receive authentic answers to questions, rather than simply what the student feel the teacher wants to hear. As stated above, the goal of these conferences is to foster independent thinking while evaluating the meanings students are making as a result of their learning experiences.

GRID SHEETS

Several learning events within this unit will involve either student performance or the presentation of a product. Therefore, grid sheets will be used to record how well students have met certain criteria as determined by the overall goals of the curriculum. Seen as a type of rubric, the columns of the grid will consist of the names of students, whereas the rows will distinguish the various components of the performance or product

Writing Assignment #1 → Johnny's injury

(Blues)	CLARITY	JUSTIFIED OPINION	ORGANIZED	INCLUDED TEXT EXAMPLE	BEGINS + ENDS W/ WHAT SHE BELIEVE
Debra	✓				
Zoë	✓ Excellent (very clear)				
Maura	✓ needs work (almost clear, except end)				
Melissa (Missy)	✓ needs work (irrelevant info throughout)				
Ayanna	✓ Poor (all over the place)				
Anya	✓ Excellent (has to/clarify tighten end)				
Kate	✓				
Lindsay	✓				
Nina	✓				
Anny	✓				

Example 1: A Sample Grid Sheet for Assessing Writing

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that the teacher wants to examine. In this way, every student is being assessed according to the same criteria, but does not necessarily have to take the same path towards the desired end. As Newman, Griffin, and Cole note, "appropriable child behaviors come in great variety, requiring flexible expertise on the teacher's part to weave them into a productive instructional interaction" (1989, p.80). These grids will be Xeroxed and kept on hand to use during role plays, current event analyses, readings of student writing, as well as culminating activities during which students will present, through various modes of expression, the campaign they have devised. This grid sheet will specifically be used to assess students during the culminating presentations that will occur.

LITERACY ASSESSMENTS

Although students will not be assessed on reading during this unit, their writing is seen as an integral to meeting the overall goals of the unit. An important prerequisite for being able to involve oneself in a social cause is the ability to articulate one's ideas in print. Most forms of civic action begin with a single letter, and therefore it is imperative that students become aware of the power of the written word in having one's voice be heard. Students will rarely have a live audience to address, and if they do it will be the result of countless pieces of writing.

In line with a functional view of literacy, students' writing ability will be assessed according to the specific purpose of the piece they have created. For example, the criteria for assessing their ability to create a persuasive piece will not be the same as that which will be used for their interior monologues (see Subject Overview). In regard to the monologue, a response piece to either a film or a role play that is written in a character's voice, the following components may be appropriate: 1) ideas, 2) organization, 3) ability to "get inside" another, 4) emotional content, and 5) character's perception of the natural world. On the other hand, the persuasive piece will require students to present their argument, consider possible objections, and in turn present viable solutions to these

objections. These essential features, along with the use of conventions in making the piece communicable, suggest very different criteria than that used for the monologues. Overall, students' writing will be assessed using criteria that reflect the intended outcomes of the unit.

NONJUDGMENTAL FEEDBACK TO ENCOURAGE SELF-EVALUATION

Students will not automatically enter the realm of self-evaluation unless the proper context emerges for them to do so. There are two primary means through which I tend to encourage self-evaluation in students. The first is more informal and involves consistent feedback to students that is non-evaluative and therefore allows them to self-reflect, and very often answer their own questions. By avoiding words such as 'good', 'right', or 'wrong', teachers can instead ask relevant questions as a way of nurturing students' own abilities to assess themselves. In light of the guiding principle of this unit, one which states that students will learn about *themselves* in relation to the environment, it becomes clear that introspection, self-reflection, and self-evaluation will be as much a part of their learning as it will be their assessment. If students are engaged in the process of self-evaluation the curriculum will become more authentic and they will be more likely to internalize what they have learned. Moreover, there is no doubt that the effectiveness of this unit has to come from inside, since intrinsic motivation is a necessary condition for truly caring about the natural world. Students cannot be driven by external factors, although the environment is "external" to the students, it is when they begin to feel a personal stake in its condition that they will learn to reflect on their own behaviors in relation to it.

CHECKLISTS TO ENCOURAGE SELF-EVALUATION

Although checklists will be used in several learning contexts, a major goal of assessment within this unit is to familiarize students with more formal methods of

examining what they know. By working with students to create a checklist, the teacher can herself assess what is important to the student. In this way, assessment serves to inform both the teacher and the student about what is worthy of understanding. I am not suggesting that teachers simply allow students to create a checklist for their own learning behaviors and to accept whatever criteria they choose as valid. Rather, I see the checklist as a collaborative endeavor on the part of teacher and students. As they engage together on developing appropriate and reasonable criteria, the teacher will become more acquainted with the student's learning style, while the student feels a sense of control over his or her own learning. Both of these outcomes will in turn effect the quality of the instructional experiences which follow.

ATTITUDINAL SCALES and QUESTIONNAIRRES

No goal is more essential to the success of this unit than for students to find their own way to connect the quality of their lives to their natural surroundings. The valuing component of this curriculum is in no way hidden, and has from the start addressed the necessity of clarifying students' values before they can begin to engage in environmental action. Through the experiences contained within this unit, students will come to understand how their beliefs are reflected in their everyday practices. Fifth graders are indeed old enough to have their own 'practices', and therefore need to be made aware of the impact they have on the natural world. Therefore, attitudinal scales will be used at the beginning and the end of the unit as a way of assessing the change, or perhaps lack of change, in student attitudes in regard to environmental issues. These scales are not to see how much knowledge students possess about a specific topic, but rather what they *believe* and the importance of acting on those beliefs in order to affect positive change on society's environmental practices.

SUBJECT MATTER OVERVIEW

Prerequisite Behaviors, Knowledge and Skills

Up until this point in the fifth grade *Change* curriculum, students have been collecting information on the environmental status and history of their communities through interviews with friends, elders, and family members. Students will have been engaged in these "community history projects" in order to gather different points of view about the local environmental changes that have taken place in their neighborhood. These interviews can be seen as a on-going inquiry process which serves to orient them to critical environmental issues from a first-hand perspective, rather than from a book or other publication that is often much more remote and abstract. These interviews, which trace the role of *place* and *space* in the community, will be most immediately relevant to this unit in the second week. It is at this time that students will begin to more formally research an issue of particular concern. With a focus on alternative perspectives and worldviews in relation to environmental problems, students will become more adept at considering several points of view and in turn devising well-rounded solutions that will encourage collective action. It is at this point that students have been introduced to the concepts of *biodiversity* and *interdependence*.

In terms of the geographical context of the unit, it will be taking place after guiding question one has been explored, i.e., "Is change inevitable?". This was a more straight-forward approach to studying basic changes that have occurred, such as the ones they discovered through their community history projects, as well as through studying natural cycles. Drawing on students' knowledge of culture from the fourth grade Immigration curriculum, they will now examine how a culture's everyday practices and traditions reflect that group's beliefs and values regarding the natural world. On one display board are the words "Is Change Inevitable?", complete with a timeline and

examples of environmental changes. We are now starting a new board with the words "How Is Change Viewed?"

It is here that we will begin displaying lists, pictures and maps and other items that will encourage students to consider the social and cultural dynamics of environmental changes. This will in turn lead to eventually framing the environment as a human rights issue. As a result, students will begin to understand their ability to affect these social dynamics through collective action endeavors. Key concepts and learning activities will be marked in italics.

WEEK ONE

Day 1 - Students will introduced to the idea of how in addition to the relationships humans have with each other, they also have an on-going relationship with the natural world. Teacher will elicit responses about children's everyday *behaviors* which have an impact on the environment. As a class we will brainstorm a list of the many ways in which we affect the natural environment each day. Looking at the list, the teacher will ask, "How do these behaviors reflect what we *believe* about the natural world?"

The remainder of class will be devoted to a read-aloud of the book Morning Girl by Michael Dorris. The teacher will preface this reading with the question: As you listen to the story of these Taino siblings in 1492, how do their everyday behaviors reflect their beliefs about the world in which they live? For homework, students will be asked to write their reactions to the day's discussion in their journals.

Day 2 - Students will be introduced to the ideas of *ecology* and *sustainability* as they relate to their own lives. What do we get from the earth, and what do we give back? We will talk about the *interdependence* of all living things and will discuss several examples that illustrate this concept. The principle is that our well-being depends on the well-being of most other living things. Class will end with the continuation of the read-aloud of Morning Girl.

**The entire afternoon on DAY 2 will consist of a trip to Wave Hill in the Bronx. There we will "take a census" of all the animals, birds, plants, and trees in the area. We will set up charts beforehand in order to record our findings. The objective is to develop an understanding of biodiversity we have to lose before we begin work to save it.

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Day 3 - In exploring biodiversity, students will examine their recordings from the trip to Wave Hill and as a class create a gigantic web of ecological relationships entitled "What We Have To Lose" to be displayed in the room (*Interdependence*). This web will represent the principle that "you cannot do merely one thing" when it comes to the environment.

In order to avoid the stereotype of native cultures as being "in balance" and "in harmony with nature", we will take our first look at the economic, social and political complexities of environmental issues within a culture-free arena -- the realm of Dr. Suess. We will watch *The Lorax*, a film in which the Lorax's Truffula Tress is cut down and its species driven out by industrial development (See Appendix B). Although the industrialist eventually sees his error and the ending is hopeful, the Lorax is still out of a home.

After viewing the film, students will respond on an index card as they think: "What beliefs of your own come into play when deciding who's side you support in the Lorax's story?" Students will use these written responses to engage in a *peer-led discussion* about the film. Possible questions: What perspectives/special interests were represented in the story? How could the Lorax have persuaded the industrialist to stop destroying the forest? Would he of had a better chance alone or collectively?

That night students will write a brief *interior monologue* from the point of view of a human or non-human character in the film (see Rethinking Our Classrooms, p.111). This could be a short narrative, a poem, or dialogue poem, that expresses the values and beliefs of that character in regard to the environment. *"How does this character's behavior tell you about what is important to him or her?"*

Day 4 - Students will receive handouts consisting of maps/graphs about the environment (to be taken from the Environmental Atlas of the U.S., Scholastic Inc., 1993). They will keep these in a three-ring binder that will be referred to as each students' "database" for enhancing further inquiry. On an on-going basis students will be asked to complete such readings and to jot down questions and responses in their journals for follow-up discussion.

We will finish Morning Girl aloud. Students will take a few minutes to write their reactions in their journals. What did they learn about the Taino perspective at the time of Columbus? How do their interests and beliefs compare with those of Columbus and his crew? Why do you think people's attitudes towards the environment have changed over time? What other changes could be related? What do you see as environmental problems that have resulted from these changing attitudes? We will make lists of changes and related problems.

Before class ends the teacher will introduce the newspaper *Indian Country Today* (see Appendix B). As a class they will look over the visual appearance and organization of the paper. Teacher will elicit responses/reactions to this modern-day American Indian media source and how they think we can use it to find out more about the way groups of people relate to the natural environment. We will end with a read-aloud of some letters on the editorial page so students can begin to get a feel for the important issues in "Indian Country".

For homework students will be asked to identify an environmental issue or concern that they have been wanting to find out more about. They should record in their journals the thoughts and past experiences that led them to this choice

WEEK 2

Day 1 - *Assessment:* Students' journals will be collected so the teacher can read and respond to the issues students have identified (see day 4).

Group Work with Current Events: Students will break up into groups of four. They will each be given a section of that week's *Indian Country Today* newspaper (sections categorized by region -- Northern Plains, Southwest, Northwest, Woodlands). They will each be assigned the task of looking over their section and identifying an article that deals with an environmental issue. They will elect members to read the article aloud to the rest of the group. They will then discuss the article and consider what it reveals about the issue and *what forms of life are affected by it*. Each member will record these responses. We will again mark on our map of the U.S. the location the article refers to.

In order to make the perspectives in the articles more clear, students can use a continuum to mark the position of each key player as a way of making it more concrete. Also, we will use the 'U.S. Facts Sheet' contained in the Environmental Atlas (1993) as a way of better understanding the geographical area under discussion.

Day 2 - *Role Play*: Students will reconvene in their groups to decide who the key players are -- non-humans included -- in the article they chose to analyze. They will then create a role play scenario which takes in account the different an often opposing viewpoints in regard to their issue. What attitudes and beliefs are reflected in this article? What attitudes and beliefs of this particular Native culture are reflected? Each group will recreate the situation using alternative perspectives. During the debriefing of each role play we will mark off, on a large map of the U.S., the issue and attach it to the appropriate region. This map will be used as an on-going point of reference for identifying important environmental problems.

As a follow-up,, students will be asked to turn one of the roles in the day's scenarios into an *interior monologue*. This could be a human, an animal, a plant, an insect, etc. This will be used to assess students' understanding of the issues raised in role play.

Day 3 - The entire class will be devoted to *student inquiry/research* in regard to the issue they identified in their journal. Before they begin the class will *brainstorm* the various ways in which they can obtain information about their issue of concern, about how they can find out what work is being done in the community/ the state/ the nation to improve the situation at hand. What are some primary sources? Some secondary sources? The class will break up into two groups. One will go to the library to investigate, the other will stay in the classroom and utilize the variety of resources made available by the teacher (see Appendix B). Students will use their journals to record 1) the relevant information they

obtain, 2) the source, and 3) any new questions that arise as a result of their inquiry. This structure will be used as an on-going approach to inquiry.

INFORMATION **SOURCE** **QUESTIONS/WISHES**

Day 4 - *Dialogue*. As a way to begin to understand the complexity of environmental positions and interests, teacher will ask the question: "If saving the environment from misuse is so critical for the well-being of all life including humans, then why is it so difficult for everyone to agree on the ways we should treat the natural world?? What are some of the different perspectives we have noticed through our role play scenarios and our own research? As we list the *different perspectives* we will then group them according to categories such as 'Economic', 'Personal', and 'Ecological'. We will conduct a rea-aloud of an essay, document or editorial about an environmental issue, during which students will identify the interests of the writer according to the above categories.

In regard to their own individual inquiries, students will be encouraged to begin collecting information that promoted a particular *interest* in relation to their topic. "Who is speaking, and what beliefs/attitudes/interests affect his or her point of view??"

WEEK 3

Day 1 - A Look at Our Own City

Using the topics that students are researching as a base, teacher will ask: "How so these environmental issues that we read about affect our lives here in New York City?" As a group students will share their inquiry problems, after which the class will offer examples of how that problem applies to life in New York. How is our city dealing with garbage, pollution, nuclear waste, water shortages, population growth, greenhouse emissions? As an on-going approach to becoming more informed about how the issues directly affect their lives, and in turn to get students thinking about how they can become involved, we will use a large map of New York City to mark where various facilities are located.

Day 2 - *Editorial Article Analysis*. Class will begin with a teacher reading of an editorial from *Indian Country Today*, entitled "Lakota Elders Knew Their Place in the Cycle of Life" (see Appendix). She will elicit responses about the attitudes and beliefs of the Lakota in regard to the natural world. "How are these beliefs similar to those of the Taino? Why do you think that people of similar cultural traditions often feel the same about their relationship to the natural world?

This introduction will serve to frame a second *article analysis*. Students will reconvene in their original groups (in which they also role played) and will be given the same regional section, but in the current week's issue (a weekly publication). They will read and discuss it using the editorial about the Lakota as a point of reference. "What are some possible solutions to the problem/issue in the article? Drawing on their awareness of different environmental perspectives, they will devise possible *solutions* to the problem. Concept: "What possible solution will support *sustainable development?*"

Day 3 - The class will play a kind of 'game' in which the teacher will read various quotes from individuals who held a deep concern about the condition of the natural world. Possibilities include John Muir, Sitting Bull, Henry Thoreau, Wendell Berry, Vine Deloria, Rachel Carson, Chief Seattle (See Appendix B). Students will brainstorm and try to use key words and phrases to describe the person who is speaking. "What values and beliefs are reflected in these writings?" As the teacher reveals the speakers, students will engage in a discussion of why perhaps some people's words were given more credence than others at the time they were spoken. "Why did John Muir have such a tremendous impact on environmental thinking, where as Sitting Bull's were often discarded as unrealistic and 'exotic'? What other historical events were occurring that would necessitate not listening to the leaders of particular Native American groups?" The aim of this discussion is to elicit from students their ideas about how the right to a clean and safe environment is indeed a *human rights issue*.

Assessment. The rest of the class will be devoted to *student-teacher conferences* about how their inquiries are going. They will use their inquiry journals to communicate questions/problems/insights with the teacher. The aim of these conferences is to have students articulate the issue they are focusing on, to guide them towards original sources, and to encourage them to notice the point of view each piece of information is presenting. Students will do individual research during this time.

Day 4 - *Guest Speaker:* Yesterday's discussion can be seen as a lead-in for today's events. We will have a representative from either the Community Alliance for the Environment (CAFE) or the New York Public Interest Research Group (NYPIRG) to come in and speak to students about the relationship between human rights and the quality of the local environment. He or she will talk to students about specific past, current, and future projects that work towards bettering the environment for ALL LIFE -- not just for those in certain socio-economic classes (For more on these Organizations see Appendix). The speaker will likely be a young person (since both Orgs recruit from local colleges), and will be skilled at how to present these issues to young people. We will use our community map (see week 3, day 1) to mark off the areas these Groups are working in.

During the question and answer time students can ask about their specific inquiry topic, as well as the issues they have read about in *Indian Country Today*. How are the links between land, culture, and tradition for Native American groups addressed by decision-makers? Who *are* the major decision-makers?

Class will do a K-W-L and students will write about what they have learned/want to learn in their journals.

WEEK 4

Day 1 - *Case Study Role Play*: Teacher will begin class with a read-aloud of a case study about "*The Incinerator Man*" (See Appendix B). Briefly, this case is an overt example of

injustice right now in New York is in the Greenpoint section of Brooklyn. There is already one incinerator in a residential neighborhood that for a time violated federal pollution standards and officials are planning a second. Area residents have the lowest median income in Brooklyn, and are mostly Latino and Eastern European immigrants and Hasidic Jews. "What *hypotheses* can we draw from this information?". Students will engage in a peer-led discussion about all the different groups, individuals, animals, birds, etc. who are affected by the Greenpoint situation. How are groups who do not live in the Greenpoint neighborhood also affected? Building on yesterday's speaker, the teacher will explain how local neighborhood groups of Latinos and Jews have formed coalitions in order to obtain their rights to a quality of life. How could other groups help *persuade* decision-makers to respect the rights of people and the environment? Why does the concept of *environmental justice* unify seemingly different ethnic groups?

Class will end with a student read-aloud of a story in Keepers of the Earth. This will allow students to stay connected to the role of story in understanding the importance of the land

Day 2 - *Role Play*. Students will break into groups of three or four, with each one taking on role in the "Incinerator Man" debate, such as immigrants groups, representatives of the incinerator, local merchants, children, school officials, parents, environmentalists. The teacher will have prepared questions for each group to consider about their roles. "How do you make your living?". "Why have you put up with such conditions?" or "What are you gaining from running your facility?". Students will then have the chance to present their points of view and hear from the other groups. This will be framed as a "community meeting". The teacher will play the chair of the meeting in order to facilitate discussion. During debriefing I will ask students to step out of their roles and write for a moment about the most effective argument they heard and what made it so *persuasive*.

Day 3 - *Peer Critiquing and Clarification of Values*. Today students will share, one by one, their inquiry topics with the rest of the class. During this time students should use their inquiry journals to guide their ideas. Each students will be required to address these questions: 1) *Why* are you concerned with the issue as an individual? As part of a larger society? and 2) What could you do about this issue that would be consistent why you feel it is important? Using the information you have gathered so far, how do you feel you could become more actively involved in a solution?" Students will *peer critique* each other as a way of offering helpful advice and suggestions.

Day 4 - Today we will revisit the words of John Muir and Chief Seattle. The teacher will provide handouts with these words written out. We will *compare and contrast* their words to uncover the similarities and differences between them. Using visual images from the Industrial Revolution and the Westward Expansion eras of the 19th century, the teacher will elicit responses from children about how their words reflect the *changes* that were occurring when they were written/spoken. Teacher will provide necessary background information about the Industrial Revolution. Why do you think people during

this time did not listen to Chief Seattle in the 1850's, where as John Muir went on to found The Sierra Club in 1890? This question has no easy answer, but requires students to think about why Chief Seattle represented a significant threat to those in power at the time.

The teacher will then create the scenario: "I want each of you to reread these words silently. As you read I want you to pretend that each speaker is addressing you personally right at this moment. Have an internal dialogue! Speak back in your head and think about how their words apply to the present-day world. Think about the issue you are investigating. How do these words speak to the problem you are researching?" After making these connections with past environmental forewarnings, the teacher will suggest that students begin a *class mural* that expresses the thoughts and feelings of both John Muir and Chief Seattle. Although from very different cultural traditions, how do their concerns for *environmental justice* unify them? This mural will be huge and will embody the idea of how the responsible use of the Earth's *resources* cuts across time and space.

WEEK 5

Day 1 - *Going On-Line, Literature Circle, Mural, Audio Tapes*: One group will work on the mural, another will share a piece of literature, a third will listen to "Living On Earth" tapes (see Appendix B), and another will rotate use of the computers as a means for finding out about all local and national organizations that deal specifically with their research issue. What are some of the major organizations working for justice in this area? As a result of the peer critique session last week, students will know who in the class is dealing with the same/similar topic, and how they could pool their findings. Although all environmental issues are intimately related, students need to understand how groups need to tackle the problem piece by piece in order to reach the same common goal. This class is aimed at generating lists of organizations that they can contact. It will make the issue become even more real and immediate for students.

Day 2 - *Reaching the Public Sphere*: Teacher will begin class with a read-aloud of persuasive pieces meant to influence public opinion. Numerous examples can be found in *Indian Country Today* editorials, as well as various environmental publications. What makes a piece of writing *persuasive*? (see Burkhalter, 1995 for elements of persuasive writing). How can you get your readers to agree with your suggestions? How can you anticipate a reader's objections? What will make your argument strong in light of these possible objections? To structure this activity we will create three columns on the board (see below). We will use issues the students are dealing with as examples. In relation to Greenhouse Gas Emissions, a student will suggest why we should eliminate Styrofoam and aerosol cans (Column 1). Teacher will then say why she would be against that idea (Column 2). Then the student will propose a solution to that problem (Column 3). This process will be repeated until the teacher feels that students have an understanding of how to build an argument.

Day 3 - *Choosing Your Audience and Devising Your Campaign:* Students divide into "coalitions" in order to discuss with their peers the audience they wish to target and how they think they can best persuade this audience to listen and respond to their concerns. As each student articulates the specific purpose and audience for his or her piece, the student will then be better able to begin writing. In their groups they may address such questions: How can I best appeal to the audience I have chosen? If it is the editorial page of a newspaper, who are the readers and what are the viewpoints of the editorial board?? How can I get my readers to empathize with my concerns? How can I get readers to realize that they themselves are at stake? What do I understand about the "You can't do merely one thing" principle? (see week 1, day 3).

Day 4 - *Writing the Persuasive Piece*: Students will work in class devising their campaigns. At this point they are focusing on their written pieces in order to convey their point of view to a larger audience. They will have to *synthesize* the information they have been exposed in order to create a reasonable and coherent argument. What have they learned from their own research? The guest speaker? The excerpts from famous environmental thinkers? Native American views of the land as expressed through their myths, their traditions, and their news media?

The next several days will be a time of synthesis, during which students will pull all the bits and pieces necessary for expressing their own point of view to their desired audience. Since this portion is meant to be emerging and will in turn be informed by the specific paths of action the students have chosen, the teacher's role will be to facilitate and support children in their pursuits. If one child wants to send a petition to a government representative, the teacher will help him or her devise a petition or a collective document with many signatures. If a student wants to organize the school in an effort to get rid of Styrofoam at fast-food chains, the teacher will guide him or her through the steps necessary for creating such a change.

During this time the teacher will also encourage students to use more than one medium for expressing their point of view -- create a picture, a cartoon, a poem, a fiction story, a song, a skit, a movement -- to convey to others their concerns. Although not all of these can be sent with the letter, of course, the idea is to create a repertoire of possible ways you can convince others to stop and listen.

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THE DURATION OF THE UNIT

And the world cannot be discovered by a journey
of miles, no matter how long, but only by a spiritual journey,
a journey of one inch, very arduous and humbling and joyful, by which we
arrive at the ground at our feet, and learn to be home.

Wendell Berry

CULMINATING EVENTS

The campaigns that students devise will serve as their culminating projects. After the creation phase is over and letters have been sent out, students will present their campaigns to their classmates. There is no doubt that at this point students will have tapped into their own emotions and will express their efforts in a way that is most meaningful for them. This will be a fun time, but mixed with the laughter will be the underlying bittersweet messages these efforts need to be sustained and passed onto future generations if their effects are to be enduring.

These campaigns should be seen as the beginning of an on-going effort by students to affect change and to work towards environmental justice. As they gradually receive responses to their letters they will build upon what they have accomplished thus far by taking their cause one step further. This cannot be planned in advance, but simply requires the teacher to have faith in students' own abilities to commit themselves to something they believe in, and to discover remarkable ways of letting these beliefs be known to others.

In addition, the mural project will serve as a visual synthesis of all the experiences that the students have taken away from the unit. It is, in this way, a collective expression of the meanings made by each individual student. Students should feel free to put their poems, meaningful quotes, names of individuals who worked for a better world for all, as well as the dilemmas we now face. When we ask "Can We Affect Change?", students will hopefully understand that yes, indeed they can, but that it is an evolutionary rather than a revolutionary process, it requires an enduring commitment to changing people's attitudes

and beliefs about the environment. They will understand that behavior changes are often temporary and fleeting if they are not grounded in an overall way of seeing.

ASSESSMENT

Throughout this unit assessment will be on-going and will be used by the teacher to determine if and how students are understanding the material. Examples that are consistent with those outlined in the Assessment section of this unit are: Anecdotal Records during all activities, Journal Collections/Responses at one-week intervals, Student-Teacher Conferences (at least twice) , and Grid Sheets and Rubrics to assess writing pieces and culminating presentations. In addition, to directly encourage self-evaluation, students will be asked to reflect on what they have learned and to formulate a question that they feel would reflect what they have taken away from the unit. Each child can contribute at least one question, and the teacher can then use them to devise a questionnaire for students to complete. This will not only serve as an excellent assessment opportunity for the teacher, but will further enrich students' understandings as well as their ability to reflect on a meta-cognitive level about what they know and believe.

WHERE WE'RE AT

At this point in the curriculum students have devised a "plan for action". They have reflected upon their *own* values and behaviors to make sure they are consistent with their plan. This reflection has been essential for students if *their civic action is to be consistent with their personal lives*.

If the teacher feel that this connection between civic and personal action needs to be reinforced, she or he can introduce another case study that conveys this idea. It is called "Students Attack Global Warming" and it is published by The World Resources Institute (See Appendix B). This is an inspiring story of how children banned together to outlaw Styrofoam in MacDonald's restaurants. However, the emphasis is on the ways the

students made personal changes before taking political action. This case study will also serve to further motivate students.

WHERE DO WE GO FROM HERE?

From here students will wait to see what responses they get from the letters they have sent out. During this time the teacher will continue to explore more deeply the social inequities that are related to environmental problems. Does everyone have a real voice in these concerns? Or does affluence and high socioeconomic status allow some to enjoy to enjoy clean and safe environment, whereas others are put into 'high risk' zones full of toxic air and dirty water? We will begin to examine in more detail the work of Non-Governmental Organizations (NGO's) and the different ways that these groups are working on national and local levels to affect change. Although at first it was important for students to use their own initiative and genuine concern for devising their plans for action, they are now prepared to see the bigger picture and the ways that various causes are linked to the common goal of saving our world as it is being pushed beyond its capacity to sustain itself.

As a way of bringing the issues back home to the local area, students will continue to mark off on the community map the locations of various facilities that affect the quality of the environment. Although controversial, students need to understand how very often these facilities are in areas with high immigrant populations. What message is being sent about the importance of a clean and safe environment *for all*??

APPENDIX A

References

Banks, James (1990). *Teaching Strategies for the Social Studies*. New York: Longman Press.

This comprehensive overview of the many components of an effective social studies curriculum provides educators with approaches to planning, organizing, and setting goals. Banks offers ways to consider value issues and human rights, as well as role of the social science disciplines in the curriculum.

Bellamy-Foster, John (1994). *The Vulnerable Planet: A Short Economic History of the Environment*. New York: Monthly Review Press.

A powerful journey into the social and historical roots of the environmental crisis. Bellamy-Foster provides a highly critical account of how the growth of the world economy has led to destructive conditions such as population explosions, urbanization, energy over-consumption, and industrialization. His focus is on the human injustices that are inherent within environmental degradation.

Bigelow, Bill (1996) "How My Schooling Taught Me Contempt For the Earth." *Rethinking Schools* v.11, n.1: 14-17.

As a seventh grade teacher and editor of the Rethinking Schools publication, Bigelow writes from a personal perspective about how his own education omitted consideration of the natural world, and through omission, was creating a sense of ecological apathy in students. Bigelow offers valuable suggestions of how teachers can create an ecological curriculum that is integrated rather than separate from other topics being studied.

Bowers, C.A. (1993). *Education, Cultural Myths, and the Ecological Crisis*. Albany: State University of New York Press.

Bowers critiques the modern educational system in this country in terms of its "hidden curriculum", one that promotes the ideas of progress and development as guiding metaphors for environmental exploitation. In this book he discusses what he calls the "emancipatory liberals" such as Dewey and Friere, who still, according to the author, promoted theories that supported the culture of progress. He offers what he sees as the necessary transformations that must occur to create a sustainable culture.

Brooks, Jacqueline (1993). *In Search for Understanding: The Case for Constructivist Classrooms*. Alexandria: Association for Supervision & Curriculum Development.

Uncovering the myths and misconceptions surrounding "Constructivist" teaching methods, Brooks presents images for educational settings which emerge from authentic

engagement, social interaction, self-reflection and student-centered construction of meaning.

Burkhalter, Nancy. (1995). "A Vygotsky-Based Curriculum For Teaching Persuasive Writing in the Elementary Grades"., *Language Arts*, 72 (3), 192-199.
This article provides a framework for teachers to approach the teaching of persuasive writing, one that is driven by the objectives for this type of writing. Burkhalter's methods also include considerations of assessment and functionality of pieces.

Herman, Joan., Aschbacher, P., Winters, L. (1992). *A Practical Guide to Alternative Assessment.* Alexandria: Association for Supervision & Development.
This book offers structure and guidance on the creation and use of alternative approaches to evaluating the effectiveness of teaching as well as learning. Under the premise that instruction and assessment are two sides to the same the authors offer concrete frameworks for integrated, context-bound assessment techniques.

Thoreau, Henry David. (1854, recent edition 1980). *Walden.* New York: The New American Library.
A classic in conservation philosophy, this journal-style narrative reveals a rich journey into the mind and heart of a nineteenth century scholar who embarked on what he called an "experiment in essential living". Fearing the rise in industry, Thoreau disengaged from society learned to "live deliberately".

Peterson, Ralph., Edes, M. (1990). *Grand Conversations: Literature Groups in Action.* New York: Scholastic.
A practical guide to implementing a literature-based program that allows children to make their own meanings through active discussion and open dialogue. This book also outlines the major literary elements such as time, place, point of view, metaphor, theme, and discusses how a teacher use these to enhance discussions.

Tyler, Ralph, W. (1949). *Basic Principles of Curriculum and Instruction.* Chicago: University of Chicago Press.
This classic educational work provides educators with a framework for developing curriculum based on goal and objectives rooted in intended behavioral outcomes. Tyler emphasizes the importance of a broad conceptual foundation in the acquisition of new knowledge.

Wasserman, Pamela., "Population Education: Lessons for a Changing World", *Social Education*, 60, (7), 439-442.

This article discusses the "silent explosion" that has affected virtually every environmental condition we are now facing. Wasserman shows the relationship between too many people and problems of pollution, greenhouse gas, soil erosion, deforestation, energy consumption and so on. Well-organized lesson ideas included.

Weincek, Joyce , O'Flavahan, J., "From Teacher-Led to Peer Discussions About Literature. Suggestions for Making the Shift", *Language Arts*, 71 488-490.
The authors discuss the importance of fostering independent thinking, critical reasoning and positive social interactions through peer-led groups. These groups can be distinguished from teacher-directed discussions in that they are "decentralized".

Zinn, Howard (1995). *A People's History of the United States: 1492-Present.* New York: Harper Perennial, Inc.
This is a brilliant and moving history of the American People from the point of view of those who have been exploited politically and economically. The author traces events that have made "history" -- and those that have not -- with personal narratives that have been largely ommited from most texts. The quotations in this book are used most effectively to give a sense of the exprience of African-Americans, women, Native groups, and poor laborers in this country. This book will open its readers to the realities that are often "brushed under the national rug".

APPENDIX B

Resources for Young Adults

Although I specifically chose to focus on books and materials that were meant to engage older children, there are indeed a great array of picture books for younger children that address environmental issues in ways that children can understand and respond to. For a list of additional books as well as those that address younger audiences, see *E for the Environment: An Annotated Bibliography of Children's Books with Environmental Themes* by Patty Sinclair.

Busch, Phyllis. (1975). *Dining on a Sunbeam: Food Chains and Food Webs.* New York: Four Winds Press.
Where does food get its power? From the sun, of course. This marvelous book goes on to explain in clear text sprinkled with excellent photographs just how the sun's energy gives us the food we eat, and keeps us and all other animals, as well as plants, alive.

Cone, Molly. (1992). *Come Back Salmon.* San Francisco: Sierra Club Books for Children.
A group of dedicated elementary students adopt a polluted stream and bring it back to life in this moving and inspiring story that suggests that dedication to preserving the environment is as natural as the earth itself.

Bellamy-Foster, David. (1988). *The River.* New York: Crown Publishers.
This timely book relates how plant and water creatures co-exist in a river and of their struggle to survive a man-made catastrophe: the dumping of waste into their habitat.

Dorris, Michael. (1990). *Morning Girl.* New York: Hyperion Books.
In alternating chapters, Morning Girl, a twelve year old Taino, and her younger brother Star Boy, vividly recreate life in 1492 on what is now a Bahamian Island -- a life that is rich, complex, earth-based, and soon to be threatened.

Dorris, Michael. (1992). *Guests.* New York: Hyperion Books.
In the same historical context of Morning Girl, this book focuses on one boy's coming of age during a village-wide preparation for the "guests", who are Columbus and his crew. A telling tale from an underrepresented perspective that includes an intimate look at how the Taino viewed the natural world.

Milbrath, Lester., (1994). *Learning to Think Environmentally: While There is Still Time.* Albany: State University of New York Press.

This book appears on both student and teacher resource lists because of its interesting and 'user-friendly' format that will allow children to thoroughly engage. Presented as an interaction between an envinrmentalist (Milbrath) and a curious neighbor, valuable information about our environment and the way it is being pushed beyond capacity is discussed in a question and answer format. Terms and concepts are highlighted and defined in the index. A must read for older children and adults.

Langone, John. (1993). *Our Endangered Earth: What We Can Do To Save It.* Boston: Little, Brown, and Company.

Another book for older children, this book discusses the sensitive social issues attached to environmental concerns. Langone strikes a balance between personal input from young adults with that of professionals in a straightforward informational narrative. Also, it gives readers many practical suggestions affecting change in the way people view and treat the environment.

Teacher Resources and Materials

Dwellings: A History of the Living World. Linda Hogan, New York, Touchstone Books, 1995)

Although the title does not suggest it, this is a slim volume of reflections and stories by an award-winning Chickasaw poet and novelist. Her life-long love of the living world and its inhabitant should be shared with children in order to expose them to these lyrical musings on the nature of nature. The messages are truly universal.

Environmental Atlas of the United States, Mark Mattson, New York: Scholastic Inc., 1995.

This informational book uses maps, graphs, diagrams and photographs to explore how natural and human forces are constantly shaping and changing our environment. It also gives readers the opportunity to consider what they can do about environmental concerns, as well as a look at what the government is – and is not – doing.

Green Essentials: What You need to Know About the Environment, Geoffrey Saign, San Francisco, Mercury House, 1994.

As the title suggests, this book the most comprehensive guide to learning about environmental conditions and problems. It is an ideal fact source for the classroom since it allow one to look up any topic in an encyclopedia-like format.

Indian Country Today, a weekly newspaper published in Rapid City, SD. 1920 Lombardy Dr. Rapid City, SD 57701.
Full of limitless opportunities to learn about modern Native American culture and the issues that are most important to those who live on and off-reservation. The articles are easily accessible to older children, and the format which includes an editorial page, as well as sections separated by region, will provide an educational vehicle for becoming aware of the changing, evolving Indian cultures that exist today.

Learning to Think Environmentally: While There Is Still Time., Lester Milbrath, Albany: State University of New York Press, (1994).
See same title under children's resources. A must for teachers and students to learn how to see through an ecological lens.

Keepers of the Earth: Native American Stories and Environmental Activities for Children, Michael Caduto and Joseph Bruchac, Fulcrum, Inc., Golden, CO., 1988.
It would be difficult to say enough about the value of this collection for uniting Western scientific understandings with Native beliefs and stories. Through the myths and activities provided, students will begin to see how caring for the Earth and treating it with respect are not mystical and exotic ideas, but can be grounded in our everyday lives. Each story is related to hands-on activities designed to inspire children.

Keepers of the Animals: Native American Stories and Wildlife Activities for Children. Michael Caduto and Joseph Bruchac, Golden, CO, 1991.
Similar in approach to Keepers of the Earth, this collection focuses on Wildlife specifically and encourages participants to adopt a more humane view of the interdependence between all creatures, human and non-human alike.

People and the Planet: Lessons for a Sustainable Future. Zero Population Growth Publications, Washington, DC, 1996. ((800) 767-1956).
A teaching kit to help students grades 5-9 explore the interconnections of human population growth, natural resource use, biodiversity, and social justice. It is interdisciplinary, environmental education, and global studies in one. 30 hands-on activities and 4 readings using problem-solving and critical thinking.

Rethinking Columbus: Teaching About the 500th Anniversary of Columbus's Arrival in America, A Special Edition of "Rethinking Schools", Rethinking Schools, Ltd. 1991.
This special edition of Rethinking Schools *highlights Native American issues and provides readers with material that will allow them to question whose eyes history is most*

often seen through. The articles contained within it will provide a context for thinking critically about social values and beliefs.

Rethinking Our Classrooms: Teaching for Equity and Justice, A Special Edition of "Rethinking Schools", Rethinking Schools, Ltd., 1994.
An invaluable information source for educators to reflect on their own practices and if the values of the classroom are truly consistent with those of a democratic society. Children do not simply receive information, but must use all their modes of expression and communication for expressing their ideas about real-world problems. This book gives teachers the inspiration and strength to enter the realm of critical teaching.

To Become a Part of It: Sacred Dimensions in Native American Life, Edited by D.M Dooling and Paul Jordan-Smith, San Francisco: Parabola Books, 1989.
This series of essays is a good starting point for anyone interested in understanding more about native beliefs and values. These essays can be read by older students for group discussion.

Audio and Audiovisual Resources

Living On Earth, a weekly radio program broadcast nationally on various local stations. Check your area by calling and writing to "Living On Earth Headquarters, 8 Story St. Cambridge, MA, 02138. (617) 868-8810 or http//www.loe.org.

The Lorax, 25 minutes, VHS, Bullfrog Films, Oley, PA 19547 or 1-800-543-FROG.
A classic Dr. Suess film about a paradise in the great woods clear cut and polluted. The question is, did the Lorax, the spokescreature for the environment, win or lose? This is ideal for engaging children in the social and economic complexities of environmental issues without didacticism and in a style unique to Dr. Suess.

Organizations

CARETAKERS OF THE ENVIRONMENT INTERNATIONAL/USA.
2216 Schiller Ave.
Wilmette, IL 60091
An international network that helps students in places as far apart as India, Africa, England and the U.S. work together on environment-related projects. Examples include "Eco-art" in Arizona and promoting peace through the environment in Northern Ireland.

CHILDREN'S ALLIANCE FOR PROTECTION OF THE ENVIRONMENT (CAPE)
P.O. Box 307
Austin, TX 78767
A global children's network that has information about hands-on projects, including beach and lake-shore clean ups, tree-planting, and preservation of rain-forests. Its newspaper, written by kids, is called "Many Hands".

EARTH KIDS ORGANIZATION
P.O. Box 3847
Salem, OR 97302
A School-based computer network set up to communicate environmental information and the results of projects, such as adopting streams, animals, and trees.

KIDS FOR A CLEAN ENVIRONMENT (KIDS FACE)
P.O. Box 158254
Nashville, TN 37215
Conducts letter-writing and hands-on projects to encourage world leaders to help stop pollution. FACE started with one child who got her unanswered letter to the President displayed on several billboards.

NORTH AMERICAN ASSOCIATION FOR ENVIRONMENTAL EDUCATION (NAAEE)
P.O. Box 400
Troy, OH 45373
An umbrella organization with affiliates across the continent, the NAAEE serves as a communication network for educators, activists, and environmentalists who are committed to increasing awareness of the interconnections between the environment and knowledge and beliefs about the world. The organization sponsors programs and conferences that work towards this end. In 1997 the NAAEE Conference, "Weaving Connections: Cultures and the Environment" will be held in Vancouver, B.C. from August 15-19.

SIERRA CLUB
85 Second St.
Second Floor
San Francisco, CA 94105
Founded in 1992 by John Muir, this organization promotes responsible use of the Earth's ecosystems and resources. Members and organizers look to educate humanity to restore and protect the quality of the natural environment. They offer a multitude of teaching resources for educators and only ask for a donation in return.

STUDENT ENVIRONMENTAL ACTION COALITION (SEAC)
P O Box 1168
Chapel Hill, NC 27514
Aims to unify student activists through a national support group, to deal with environmental issues from recycling to toxic disposal. Concentrates on social reasons for environmental problems.

YOUTH FOR ENVIRONMENTAL SANITY (YES!)
706 Frederick St.
Santa Cruz, CA 95062
Conducts workshop in U.S. schools that motivates children to solve environmental problems and teaches them to be effective activists.

Samples of Unit Materials

The Words of John Muir, from his journals, 1870-1881:

Indians walk softly and hurt the landscape hardly more than the birds and squirrels, and their brush and bark huts last longer than those of wood rats, while their more enduring moments...vanish in a few centuries. How different are those of the white man...roads blasted in the solid rock, wild streams damned and tamed and turned out of their channels and led along the sides of canons and valleys to work in mines like slaves...Long will it be ere these marks are effaced, though Nature is doing what she can...patiently trying to heal every raw scar.

All sorts of human stuff is being poured into our valleys this year, and the blank apathy with which most of it comes in contact with the rock and water spirits of the place is most amazing...If I should be fated to walk no more with Nature, be compelled t leave all I most devoutly love, return to civilization and be twisted into the characterless cable of society, then these sweet, free rovings will serve as glimpses of treasures that lie beyond my reach.

I often wonder what man will do with the mountains -- that is, with their utilizable, destructible garments. Will he cut down all the trees to make ships and houses? If so, what will be the final upshot?

Our government ...is like a rich and foolish spendthrift who has inherited a magnificent estate in perfect order, and then has left his fields and meadows, forests and parks, to be sold and plundered and wasted.

Everyone needs beauty as well as bread, places to play and pray in, where nature may heal and cheer and give strength to body and soul. This natural beauty-hunger is displayed in poor folks' window gardens made up of a few geranium slips in broken cups, as well as those costly lily gardens of the rich. Nevertheless, gain-seekers of every degree from lumbermen, catlemen, farmers, eagerly trying to make everything dollarable, so that, as they say, "Man and beast may be fed and our dear Nation grow great".

The Words of Chief Seattle, 1854, spoken to tribal assembly before signing Indian Treaties:

Every shining pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory of experience of my people. Teach your children what we have taught our children, that the Earth is our mother. The rivers are our brothers, they quench our thirst and feed our children. The air is precious to the red man, for all things share the same breath -- the beast, the tree, the man, they all share the same breath. And what is man without the beasts? If all the beasts were gone, men would die from a loneliness of spirit.

This we know. The Earth does not belong to man; man belongs to the Earth. Man did not weave the web of life, he is merely a strand in it. Whatever he does to the web, he does to himself. All things are connected like the blood which unites one family. All things are connected.

- Sealth (Chief Seattle)

Incinerator Man Fights For Environmental Justice

The Incinerator Man looms 20 feet (6 meters) above the parade-watchers, staring down with his fierce, skull-shaped mask. His filthy breath hisses through chimneys as he marches around Brooklyn's Greenpoint/Williamsburg district. He warns residents that their already-polluted neighborhood may deteriorate even further.

The paper mache Incinerator Man is animated by two students huddled inside directing dry-ice fumes out the gray chimneys. Although an entertaining figure, he marches with a cause: cleaning up a polluted urban neighborhood that residents feel has suffered more than its fair share of environmental insults.

City officials have proposed a second neighborhood incinerator at the Brooklyn Navy Yard; the existing incinerator in Greenpoint violated federal pollution standards until local activists forced its closure in early 1992. Residents near the Navy Yard have the district's lowest median income, ranging from $9,726 to $23,516 annually. Culturally, they are mostly Latino and Hasidic Jews. The proposed incinerator may, in fact, be a classic example of the latest "ism" to hit the talk shows—*environmental racism and classism*.

In 1992 the Greenpoint/Williamsburg city planning district hosted 192 hazardous waste facilities—more than any other district in New York. Twenty of them housed "extremely hazardous" substances, according to the U.S. Environmental Protection Agency. The materials dumped included poisonous metal compounds, oil and natural gas, and radioactive wastes. The district also logged the highest number of hazardous materials emergency calls (55) in New York during 1992.

Air pollution in the district is considerably worse than average. Residents breathed over 60 times more toxic emissions than the national average for residential neighborhoods in 1987. While the average pollution load for New York City air was 9,292 pounds of toxics per square mile (1,625 kilograms per square kilometer), Greenpoint/Williamsburg air carried 44,099 pounds (19,977 kilograms). In addition the district is criss-crossed by jammed highways, puffing carbon monoxide into "the hood." In early 1994, the New York state environmental department discovered that the 92-acre (37-hectare) Navy Yard was contaminated with lead, arsenic and cadmium. Neighborhood residents are worried that they may be paying for environmental inequities with their health. Boys in the district, for instance, ranked 50 percent higher than the city as a whole for several types of nervous system cancers and leukemia. Although researchers point out that this excess may result from genetic, immunologic or lifestyle differences, environmental causes cannot be ruled out.

Many New York children already have unacceptably high levels of lead in their blood. The proposed Navy Yard incinerator would be allowed to emit an additional 2,628 pounds (1,190 kilograms) of lead into the air annually. Lead can reduce children's intelligence and cause reading disabilities, hand-eye-coordination difficulties, and slowed reaction times. The incinerator would also be allowed to discharge 3,942 pounds (1,785 kilograms) of mercury—a poisonous metal that causes nervous system defects such as loss of short-term memory and visual impairments. The list of approved pollutants for the proposed Brooklyn Navy Yard incinerator also includes a toxic aerial salad of cadmium, beryllium, arsenic, nitrogen oxides, sulfur oxides, particulates, PAHs, zinc, antimony, nickel, chromium, carbon monoxide, hydrogen fluorides, formaldehyde, hydrochloric acid, hydrocarbons and others.

The students who created Incinerator Man are members of the New York Public Interest Research Group (NYPIRG) who are recruited from local schools and colleges. They are no strangers when they knock on doors around the

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Incinerator Man Fights For Environmental Justice *(continued)*

neighborhood. NYPIRG leaders are usually young people who have graduated, but remain active in the organization. NYPIRG is part of the Community Alliance for the Environment (CAFE), a coalition that unites other local groups including the United Jewish Organizations and the Latino-based El Puente.

For some time, NYPIRG members have argued that the incinerator issue is an environmental justice issue—not just a solid waste management issue. Neither is their position a simple "not-in-my-backyard" argument, they say. Instead of telling the city fathers to just make the incinerator go away, they advocate a two-pronged solution. First, reduce the amount of garbage and then recycle more.

The young activists have proposed state legislation to require manufacturers to make less waste and packaging. If the bill passes, they say, the volume of garbage in the city could be cut by 15–20 percent. Second, they contend it is possible to recycle the same amount of garbage as the incinerator would burn. That would leave only a small portion of the city's garbage requiring landfill—as opposed to the city's proposal of landfilling 300,000 tons (272,100 metric tons) of potentially hazardous ash somewhere in Virginia.

The NYPIRG proposal for 15–20 percent garbage reduction, 70 percent recycling, and 5–10 percent landfill and no incineration contrasts starkly with the city's plan—9 percent garbage reduction, 41 percent recycling, and 32 percent burning and landfilling.

The Greenpoint NYPIRG members are inspired by members in Albany, NY, who fought to close an incinerator in an African American neighborhood for seven years. The payoff came in the long winter of 1994 when the prevailing winds suddenly changed and blew black snow from the incinerator onto the governor's mansion. Within two weeks, the incinerator was closed. They also cite 150 incinerator proposals that have been defeated across the country. New waste incinerators have been banned outright in Ontario, Canada, Rhode Island, and Baltimore.

NYPIRG organizer Ludovick Blaine said that hundreds of Greenpoint students and residents joined the fight because they were mostly concerned with their family's health. Other students joined because they were interested in the issue as part of their science, political science, or sociology studies.

Over the years, students and residents created political pressure against the incinerators. In 1991, for instance, they held eight town meetings over nine months. 200–1,200 people attended each meeting.

Other tactics:

A city-wide Lobby Day was held to improve the city's proposed 20-year solid waste management plan. They succeeded in increasing programs and funding for recycling, to lessen the need for incineration.

"Truth Squads" confronted mayoral candidates. At open meetings, student NYPIRG members forced candidates to state their positions on the incinerators. Gradually, the winning candidate "improved" his position.

All-night lobbying sessions kept city council members up until 7:30 a.m. as they considered the solid-waste management plan. The plan emerged with more commitment to recycling and reduced emphasis on incineration at the Navy Yards.

The "Toxic Mile" along part of the New York Marathon race that goes through Greenpoint educated runners—and the media. A series of signs noted, "Are you breathing more heavily? Do you know why?" among other messages. The signs, which pointed out local pollution problems, aimed at embarrassing the city in a highly visible event.

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Students Tackle Global Warming

Alexis Grey was just seven years old at the time. She needed help from her fellow students in dragging the heavy, orange mail bags across the floor of the Senate hearing room. "Excuse me," she asked Senator John Chaffee, "Would you take these petitions to the President when you see him this afternoon?"

Chaffee agreed, and Senator Albert Gore (now vice president of the United States) looked on with amazement at the eight bags, each overflowing with folded papers. "How many [signatures] do you have there?" he asked.

"About 100,000," answered Alexis politely.

One of her fellow students shouted out, "And that's nothing yet. We'll have a million by Earth Day!" The packed Senate hearing room rocked with laughter—and respect.

The stuffed mailbags represented several months of work by about 2 million American students, most of whom were in the fifth and sixth grades. They belonged to a coalition of 15 student environmental organizations across the country who had joined together to help slow the global warming trend.

The student campaign was an outgrowth of an educational experiment sparked by two adults working for the Natural Resources Defense Fund. According to one, Mary Daly, they were upset by the lack of environmental education teaching materials that included any practical citizen action. Daly said they developed a curriculum about carbon dioxide and its impact on global warming. The curriculum was published in *Scholastic Magazine*, reaching thousands of children and their teachers.

It turned out that the children were concerned about the issue and eager to take part in both personal and political action. Students did most of the work from then on—studying the issue, examining U.S. policy, finding out how CO_2 emissions could be reduced.

Most of the student environmental groups had already started out as single-issue groups on other subjects. One group, Concerns about Kid's Environment, of Freeport, Maine, fought styrofoam containers at MacDonalds. It got a state law outlawing styrofoam containers in fast-food restaurants. Another group began as a result of a dying girl's last wish: to begin a project to help the Earth. Many of the groups had already found major funding sources and were "going national" in membership drives. With help from NRDC and several children's magazines, Daly said it was not hard to unite the 15 groups into a coalition.

Together, they became an organization of children 2-million strong from California, Connecticut, Florida, Illinois, Maine, Maryland, Minnesota, New Jersey, New York, Oregon, Rhode Island, Tennessee, Texas, Washington and Wisconsin, who called themselves "The Kids Coalition," and united under the "The CO_2 Challenge."

Members of the student coalition each pledged to take personal actions to reduce CO_2 emissions. They also took political action by collecting signatures on petitions to urge the President of the United States to commit the United States at the June 1992 United Nations Earth Summit international conference to reducing CO_2 levels as other industrial nations have pledged.

Personal Action

In the fall of 1991 each student pledged to cut back by 1 ton emissions of CO_2—the primary greenhouse gas—during the year. Their pledges were specific, including:

- Tuning up the family car's engine once a year—saving 900 pounds (408 kilograms) of CO_2.
- Replacing incandescent bulbs with new compact fluorescent bulbs—saving up to 45 pounds (20 kilograms) of CO_2.
- Putting a jacket of insulation on the water heater, saving (depending on whether the heater is electric, oil, or gas) from 260 to 600 pounds (117 to 272 kilograms) of CO_2.
- Chilling out the washing machine by doing four out of five laundry loads in cold water, saving 460 to 200 pounds (209 to 91 kilograms) of CO_2.

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Students Tackle Global Warming *(continued)*

- Planting a tree on the south or west side of the home to provide cooling shade, saving 150 pounds (68 kilograms) of CO_2.

Political Action

In February 1992, each group sent a representative to Washington, D.C. to take their political message to the President and members of the U.S. Senate. With the help of their NRDC advisors, they arranged a news conference, testimony before U.S. Senators, and an attempt to deliver over 100,000 petition signatures to President Bush. Their *State of the Earth* address asked the U.S. government to take part in a four-part plan to reduce CO_2 emissions, including provisions to:

- Make producing pollution more expensive, thereby cutting fossil fuel use and increasing alternative energy use.
- Require cars and trucks to get better mileage.
- Save the Arctic National Wildlife Refuge, which is threatened by oil drilling.
- Reward utilities for energy conservation—much the same as the state of California has rewarded utilities that pledge to cut CO_2 emissions by 20 percent by the year 2000.

The children asked President Bush to "make the same energy-saving effort" as they were doing, leading other Americans in the challenge. Daly said she was amazed at how well prepared the students were on technical issues.

They also asked Bush to attend the Earth Summit. In their news release, the students predicted, "Unless he commits the U.S. to that, no agreement on global warming is possible. Other nations say, 'Why should we act if the U.S.—the worlds's biggest source of CO_2—refuses to do its part?'"

The students were forewarned that Bush was pretty busy on the day they converged upon Washington—he was putting the final touches on his *State of the Union* address, to be given that night. The White House gatekeeper politely suggested that they take their petitions to the mail room. Instead, they chose to drag the mailbags up to the Dirksen Senate Office Building, where they were to make a presentation at the "Senate Special Children's Hearing on Global Warming" that afternoon.

There, in a standing-room-only hearing room, the three spokespersons of the group delivered their message to the Senators. Before national network television cameras, radio microphones and newspaper photographers and reporters, the three children spoke. Their voices were heard across the country, including in their home towns.

Senator Gore's press secretary, Marla Romash, said later that the children made a strong impact. "Children are way ahead of adults on understanding the impacts of global warming. These children had a clear message, and delivered it very strongly. The Senators were very impressed."

Romash added, "Not only their presentation, but their entire effort can't help but have an effect." She urged other children to "get involved, and stay involved."

The group planned its next action in New York, when the U.S. agenda for the Earth Summit was to be outlined. Weeks after the Washington meeting Daly said, "thousands of petitions are still coming in every day."

Source: World Resources Institute.

Questions

1. How did the students' personal actions—cutting back on CO_2 emissions—affect their political action?
2. How did coalition-building play a role in the campaign?
3. What were the advantages and disadvantages of the coalition consisting of all student members?
4. This campaign was a joint effort of thousands of students, two adult environmental education advisors, student magazines, and an environmental group. Why did the adults, magazines, and the environmental group stay in the background?

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vents.

Several years ago a newspaper in New Mexico

We fail to see how publicizing these ceremonies is beneficial to anyone.

Lakota elders knew their place in the cycle of life

NOTES FROM INDIAN COUNTRY

By Tim Giago
(Nanwica Kciji)

Every year my newspaper, *Indian Country Today*, does a special tabloid dedicated to the elders. is titled "Many Winters."

We try to interview the tribal lders and to absorb some of the nowledge they have to offer. As ey pass away, we are losing so uch of our culture, language nd traditions.

At a meeting of the Sioux ation Council a few weeks ago, ne of the participants asked, Where are all of the younger eople?" It seems that most of ie people attending the meeting ere elders, and if the younger akota do not attend, they will ever learn from their elders the nportance of these gatherings.

Not all of the elders are role iodels. Like any race we have mongst us those who have rown old without contributing the success or to the future of ieir tribe. There are those who ave gone through life dependent n welfare, alcohol or worse.

It was a favorite thing at one me for those seeking to gain pproval for their radicalism to say iat they were advised by the lders. When one asked them to ame the elders they would uickly change the subject.

But having put these elders ehind, I want to talk about those ho have made it their life's ork to bring about positive hange to their tribes. There are hose who have fought for proper ealth care, better government, ducational opportunities for their *akojas* (grandchildren) and those ho have tried to teach the oral istory of their tribes.

Quite often I read about an lder of a tribe located in the East ho was the last one left in the ribe who could speak the anguage. This is a real shame. ut in the Midwest it will never e a problem. Because of the olation of tribes such as the Sioux or the Navajo, the language continued to be an important part of the day-to-day conversation. It is to this day.

I recall writing about seeing a Bible in a glass case in New England written in the language of one of the Eastern Seaboard tribes. The author hoped to use the Bible to convert the local Indians. Sadly, when the Bible was finished there were no more members of the tribe alive to read it.

Two hundred years ago the tribal members measured their years by counting the winters they had survived. Hence the title to our tabloid "Many Winters."

An elder always knew when he or she could no longer contribute to the survival of the tribe or camp. To the modern folks, this may sound cruel, but when an elder felt the time had come, they would often go out into the coldest night, find a place to rest, and end their lives by freezing to death.

One must first understand the way life was back then. It took every member of the tribe to contribute to its survival. Often the tribe had to move great distances quickly. When an elder discovered he or she could not keep up and it meant becoming a burden on the welfare of the tribe, an elder decided this would be their last winter. They knew they were doing it for the good of all tribal members. However, the decision was always left in the hands of the elders themselves.

Is this any more cruel than placing elders in nursing homes where they are strapped to wheel chairs, wrapped in diapers and left to sit in corners for long hours while they drool upon themselves?

But in almost every Indian tribe there was that time in life when the elders were still physically capable of keeping up. This was the time when they became the teachers to the young and the advisers to those about to follow in their moccasins. One must understand that the Indian elders saw little point in living a long life if that life had lost its meaning.

I recall visiting my Aunt Lucy Vocu at her home on the Pine Ridge Reservation after she had passed 90 years of age. She said, "Everyone I grew up with is dead. I often ask myself why I am still here. I want to go on to the next world."

The length of life must also retain the quality of life. The inability to walk, talk or to contribute can also be a cruel thing.

Visit a nursing home sometime and consider whether some of the elders strapped in wheel chairs would take a different course if given the opportunity.

Perhaps the philosophy was different among the Indian nationswith regard to their elders, but like every member of that nation, the elders also knew their place in the grand scheme of things.

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Standing Rock

To the editor:

I would like to clarify certa sections of the articles on Standi Rock in the March 17-14 issue *Indian Country Today* that misleading to the public. The arti references Standing Rock officia The Cultural Protection Consortiu is a group of tribal directors w have responsibilities to any water, la or air within the exterior boundar of the Standing Rock Sio Reservation. This consortium or would recommend a position to t Economics Committee. This has r happened yet. Only the Standi Rock Tribal Council would take a po tion on the proposed act. Althou an informative article, let me clar certain sections.

The South Dakota Land Trans and Wildlife Habitat Mitigation A of 1997 would provide 198,136 ac of land for return to the state South Dakota and to five tribes. the 198,136 acres, 80,283 acres "dry lands" would be returned the five tribes. It does not indic how many of the 80,283acres wo go to Standing Rock.

Standing Rock has legislati passed providing, among oth things, the return of the "Taken A

Don't confuse

To the editor:

This letter is in response to G Bill Janklow's article in *Indi Country Today*, March 3-10.

First and foremost, Gov. Jankl has ill repute on the Rosel Reservation regarding disrespect an Indian woman. His opinions m spit to the Lakota people.

With regard to welfare refor let's get one thing straight. Welf for nonIndian recipients and e tlement benefits for the Lakota two separate distinct issues.

It's obvious that you people o read what someone wants you read. Please research the Snyder A

Furthermore, each and ev dollar has a tax on it. So let's c pretending that only those peo who have jobs pay for welfare. a lie. Anyone who has true awa ness of the economic system und stands it only operates to supp itself. Those who have a lot money are the ones who g substantial profit. That's why welfare system doesn't work. Th

Why should A

To the editor:

Why should Native Amer have to pay taxes of any s

Vest Today
INDIAN COUNTRY TODAY
MARCH 3 - 10, 199

its D.C.

Photo courtesy Sen. Jeff Bingaman

who was crowned Miss Indian New Mexico last fall, recently visited Bingaman, D-N.M., and attended the presidential inauguration. Shown, ıan and her mother Camille Vigil.

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Sandia Pueblo claim to Sandia Mountain will get court hearing

ALBUQUERQUE, N.M. (AP) Sandia Pueblo's claim to thousands of acres in the Sandia Mountains — including the Sandia Peak Tram, the electronic towers at the peak and several popular trails — will get a hearing in court.

U.S. District Judge Harold H. Greene on Dec. 10 denied a motion by the federal government to throw out a pueblo lawsuit seeking to correct a erroneous interpretation of a Spanish land grant.

The ruling was reported in a recent U.S. Forest Service newsletter.

"The major argument was whether the grant, when it referenced the Sandia Mountains, meant to the top of the mountains or to the foot of the mountains," said Jim Snow, deputy assistant general counsel for the U.S. Department of Agriculture.

The federal government is expected to submit an answer to the pueblo's claims within two weeks, said Andrew Eschen, a trial attorney for the Department of Justice.

Judge Greene's ruling basically clears the way for the pueblo to claim about 9,800 acres extending from the pueblo's current boundaries to the crest — mostly public land administered by the U.S. Forest Service.

Private land, including the Sandia Heights, Tierra Monte and Evergreen Hills subdivisions, are not included in the claim.

"We're not trying to take those away from anyone," said Malcom

> *'The major argume is whether the grant, when it referenced the Sandia Mountains, meant to the top of the mountains or t the foot of the mountains.*
>
> — Jim Sno
>
> U.S. DEPT. OF AGRICULTU
> DEPUTY ASSISTANT GENERAL COUN

Montoya, lands director f Sandia Pueblo.

Still, the private landowne have hired attorneys to interve on their behalf, Mr. Snow sai

Mr. Montoya said if granted t land, the pueblo will administer t Sandia Mountain land as wilde ness and allow public acce although that may change depen ing on tribal leadership.

The dispute stems from t interpretation of a 1748 land gra The governor of colonial Spa granted the Sandia Pueblo la that year, and a lieutenant w instructed to survey the land, M Snow said.

In the 1850s, after the Unite States took control of Ne Mexico under the Treaty Guadalupe Hidalgo, the fede government sent out its ow surveyor to interpret the Spani

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Cardiologist Galloway named

Dominant media ignores religious nature of buffalo

NOTES FROM INDIAN COUNTRY

By Tim Giago
(Nanzvica Kciji)

After more than 400 years of European immigration to this land euphemistically known as the "New World," the lack of knowledge and understanding the settlers still have of the Indigenous people who have populated the Western Hemisphere for so many thousands of years continues to amaze me.

When the National Park Service decided to slaughter thousands of buffalo at Yellowstone National Park, it was duly reported on "ABC Nightly News" and on "NBC Nightly News." These newscasts concentrated on the wholesale slaughter, but neither referenced the religious or cultural significance of the buffalo to the Indian people.

It pointed out to me, in a most poignant fashion, that the cultural gap between the settlers and the Indigenous people was as wide as ever.

On March 6, the tribal people of America and Canada held a international day of prayer and mourning for the needless slaughter of the buffalo. To the mass media, this was a non-news event. But, of course, Indian people have learned to expect this from the media. Why should they report on anything that is above and beyond their realm of understanding and comprehension? After all, the European settlers had no point of reference to measure the feelings of the American Indian on anything spiritual or traditional. They could just as well have settled on the planet Jupiter.

When the Indian nations of this hemisphere say the buffalo is sacred to them, that is exactly what they mean. Of all the creatures indigenous to this continent, the buffalo best signifies the cultural and historic differences between the red man and the white man.

When the Plains were dotted with millions of contented, grazing bison, the Indigenous peoples thrived. The buffalo provided food, shelter, clothing and tools. Before the hunt the tribal people offered prayers to the Great Spirit. After the hunt they again offered prayers. The skull of the buffalo was used in many of the religious ceremonies. The tribal people considered the buffalo to be their relative, and they used all of this magnificent animal to survive. Even after their own deaths, they were wrapped in its hide and placed upon scaffolds to offer up their own physical beings to those upon whom they fed in order to survive.

Was there any spiritual comparison the white man could make to these powerful beliefs of the Indian people? Always considering their religious beliefs to be more important, the white man dismissed the spirituality of the Indigenous peoples as unimportant. They found it a waste of time to learn anything about the spirituality of the Indian people then, and I believe they still consider these beliefs to be insignificant.

Even if Christians do not share the same beliefs as the Muslims, Jews, Buddhists, Shintoists or any other major spiritual group, they do not shrug off these other religions as insignificant. Then why are they so inconsiderate of the beliefs of the Indigenous people?

Heaven knows (no pun intended) that we have enough of our own Indigenous people who have been brainwashed and indoctrinated with the religious beliefs of the immigrants. With the financial and military support of the federal government, the missionaries set about zealously to convert the people they considered to be heathens without souls. If it was just a matter of conversion by comparison, perhaps the rate of success would have been minuscule, but with the construction of parochial boarding schools and the literal theft of Indian children from the influence of their parents and grandparents and the all-out assault on the traditions and languages of these children, conversion took on an entirely different dimension.

As I have written many times before, the edict of "Kill the Indian and save the child" was church and government policy for many, many generations.

Is it any wonder that there is such a wide gap between the cultural and spiritual beliefs of the traditional Indian people and the the mostly Christian and Jewish newspeople of the mass media? Throughout the history of the Europeans there have been efforts to destroy those religions that did not fit in with the popular beliefs.

Rosalie Little Thunder, a Lakota woman, after viewing a video of the slaughter said, "This isn't the stuff on national television. This showed the calves being killed. They don't die right away. They kick and kick. It showed people at auctions buying buffalo heads for one dollar."

Perhaps Rosalie said it for all of the Indian people of this continent when she said, "I just wonder how they can kill the buffalo. I think when people look at a buffalo they automatically think of Indians. I wonder what they are thinking."

Hundreds of Indian tribes would have given the buffalo protection and shelter rather than see them slaughtered. They were never given this opportunity. A nation is judged by how it treats its Indigenous people. How would you rate the United States of America?

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To the editor:

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To the editor:

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Northwest Today

97 INDIAN COUNTRY TODAY B SECTION

Teresa Gingo/*Today* Staff

the draw: Toni Moe of Coeur d'Alene, above, trips on one of the gaming machines at the Coeur d'Alene Jo/Casino complex at Worley, Idaho. [illegible]

Dawn Mining allowed to dump near Spokane

Radioactive waste pit borders Northwest reservation

By Danyelle Robinson
Indian Country Today

OLYMPIA, Wash. — Dawn Mining Co. will be allowed to dump radioactive uranium waste adjacent to the Spokane Tribe of Indians Reservation without providing monetary assurance for continual maintenance.

That is the upshot of a judge's recent decision from the bench despite records that show the company's 20 years of failure — and sometimes outright refusal — to comply with federal reclamation regulations.

On March 7, Judge Gary Tabor of Thurston County Superior Court in the state's capital city, upheld an administrative ruling to grant a license to Dawn Mining with little more than a $1 million letter of intent for the proposed $20 million dump-site project.

In his verbal ruling, the judge said that although the law requires a bond sufficient to pay the cost associated with reclaiming and maintaining the site, it does not stipulate when the bond must be posted.

"If they are able to threaten abandonment, it's already too late," said Shannon Work, a Coeur d'Alene, Idaho, attorney representing the tribe.

Dawn Mining has claimed that it is on the verge of bankruptcy and cannot afford to post the bond. In addition, the company claims that converting the millsite to a waste dump is the only way it can afford to clean up the area.

Without those funds, the site would be abandoned. The state, and ultimately

Please see **Millsite** B3

Land-use issues trigger old Colville Reservation conflicts

By Danyelle Robinson
Indian Country Today

NESPELEM, Wash. — Eight governments claiming jurisdiction within the Confederated Tribes of the [illegible] along Twins Lakes and expanded the ban to include all streams and lakes, said Chairman Pakootas.

That development ban, aimed at preserving water quality, impacts tribal members as well as non-Indian

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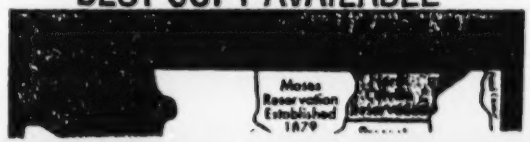

my relations: reflections on endangered spe

ve that there is not one d States of America wo, existing side by a United States that dged the independent f Indian nations and those nations treaties s and fulfills. But there ited States that has treaties with Indian times through fraud, eit, sometimes terror- nks for the first United ep for the second."

(Milnar Ball, aldwell Professor of nal Law, University rgia School of Law)

LEGISLATIVE FORECAST

By Darrell Hillaire

, vary on the number l people who came out Puget Sound in the 5 to attend the Treaty t negotiations with the . Most now agree that Indians were there to ic Stevens, the territo- of what would later state of Washington. igh his translator, John tevens addressed the al leader in Chinook g promises and secur- s on behalf of the Great

peoples who attended meeting lived in an e. Their customs, tradi- tions and culture had evolved over countless generations in a land blessed with natural resources. Streams, rivers and creeks that traversed the temperate rain forests were abundant with salmon. Waterfowl were so numerous they blackened the sky, and the land teemed with wild game. The water was clean. The air was clear. The land provided for the people.

In a few generations, the world had changed. By the close of the 20th century, the great salmon runs were all but depleted. The wetlands and the waterfowl that depend on them have all but disappeared. The ancient forests were cut, leaving fragmented and dismembered stands of trees among the debris of a dismantled ecosystem. The destruction of the Aboriginal habitat forced innumerable plant and animal species to the brink of extinction. Clean water now comes from bottles rather from rivers that are polluted with urban, agricultural, industrial or, in some cases, nuclear waste. The land is dying. Nature is dying species by species, forest by forest, stream by stream.

The question is unavoidable: Had our old people known what we know now, would they have agreed to sign he Treaty of Point Elliott? Would they even be able to comprehend a time in which humankind would cause the greatest die-off of plants and animals in 65,000,000 years? More importantly, would they have agreed to sign a treaty that would, in the end, make paradise a paradise lost?

The courts provide us some of the answers. It is common practice in courts of law to interpret the treaties as the Native peoples understood them. It is reasonable to assume that the tribal leaders who signed the Treaty of Point Elliott assumed their descendants would continue to live in a land of abundant natural resources that had nourished their people for thousands of years. The hue and cry of developers notwithstanding, Native peoples have the inherent right to a natural environment that promotes the well-being of their culture and community.

Still we see an impending silent spring all across Indian country. Business interests continue to clamor for compromise against what they often paint as the obstructionist position of tribal governments asserting their inherent rights. More recently, corporate interests have targeted the Endangered Species Act as the enemy. The ESA, they claim, places a burden on the landowner or the corporation in their efforts to develop the land and the resources. Looked at in this way, it is the snail darter or the spotted owl that are impeding progress. What we need, they insist, is to make the ESA more reasonable, more amenable to the economic needs of the people.

During the 104th Congress attempts were made to dismantle the ESA. They succeeded in part, using the blunt instrument of budget cuts to downsize agencies responsible for implementing the act.

What is, or should be, the position of Indian country on the ESA? While there is no clear consensus, several things are clear. First, any discussions on the ESA must take place on the basis of government-to-government relations. Secondly, nothing in the ESA should be construed to supersede the treaties. Thirdly, it is historical fact that the species that have been driven to the point of extinction were not brought to the brink by the actions of Native peoples. The record is clear. The extirpation of species and the destruction of millions of acres of critical habitat is the result of an economic system that places more value on short-term profit than the long-term well-being of the land and the people.

This is not an "Indian problem." Rather, it is, as the writer Daniel Bell notes, the "cultural contradiction of capitalism" and the clash of unbridled self-interest with the need for maintaining the integrity of complex and fragile ecosystems.

The truth is the ESA is not the enemy. Indeed, any further compromise on the act would likely render it ineffective and condemn countless species to extinction. This leads to the fourth point with regard to the debate over the ESA. What is needed is a strengthening of the ESA to ensure that the natural system upon which all of creation depends is restored to health. Indeed, this is one of the most ancient teachings found throughout Indian country: The creation is a gift. As Chief Seattle pointed out, the earth does not belong to us; we belong to the earth. Our ancestors are present in this land. The plants and animals are all our relations.

I have often wondered how I would explain to our people, who signed the Treaty of Point Elliott, what has become of the land. How would I explain that the trees are gone and that the animals are no longer present on the land or the birds in the sky? How would I tell them that our medicinal plants are no longer to be found or that the water is not fit to drink? How could I possibly convince them that the salmon are threatened with extinction?

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Some migh nothing to do what is import To compromis above the need is this wise? Is to compromise the dying of th to think we can Indian people i less? What is r what we can to dren and their children down t ation have arou the creation.

The ESA is tant step to help But more is ne urge all tribal l ESA and take the creation an bind us to the l tions.

Editor's Note vice chairman in Washington

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NORTHERN PLAINS

man beings deserve the right to proper burial

69

g to you about a matter extremely important

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it would help Indian people and mankind in general."

I do not feel that museums have

Getting off welfare: What's the bes

To move able-bodied people off the welfare lifestyle and into the world of productive work, what works best?

Implementing the right answer will either cost or save South Dakota

ASK THE GOVERNOR

70

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Dave Tonasket, Colville tribal resource planner

Photo courtesy Peter Donovan

Holistic management

It's back to the future for the Colville Tribe

By Peter Donovan
Special to *Today*

NESPELEM, Wash. — It's back to the future for the Confederated Tribes of the Colville Reservation, but it's a long road for the tribe to travel.

The Colville Confederated Tribes are challenged by the same problems the rest of the world faces: increasing difficulty in sustaining ways and quality of life on a deteriorating resource base and coping with the resulting conflicts.

In response, the tribe is changing something so fundamental that most people aren't aware of it.

Using the concepts of holistic management, leaders are changing the way the tribe makes decisions.

"There are little bits of the reservation that are looking better," said Chuck Jones, tribal Fish and Wildlife Department employee. It's not like all of a sudden we have massive change," he said.

"That's not going to occur, and expecting it is kind of unrealistic. When you're talking about thousands of people, it's not going to happen that way," he said. "The biggest change has been breaking down the paradigms in some of the people," said Mr. Jones.

Meanwhile, Dave Tonasket, Colville tribal resource planner, said crisis management, treating symptoms and turf battles have been the norm on the reservation for decades.

Please see **Future** B3

ICT graphic
Thom Little Moon

Symbolic shield: This shield is symbolic of the holistic resource management model being implemented by the Confederated Tribes of the Colville Reservation.

Challenges of change focusing first on tribal natural resources

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